中钢澳洲中西矿业公司
SINOSTEEL MIDWEST CORPORATION LIMITED

SINOSTEEL MIDWEST CORPORATION LIMITED

ENVIRONMENTAL MANAGEMENT PLAN (EXPLORATION)

July 2010

Document Status						
Version No.	**Author**	**Reviewer/s**	**Date**	**Approved for Issue**		
				Name	**Distributed To**	**Date**
1	T.Harries	G. Connell	10/10/06	M. Cannon	D. Broomfield	12/10/06
2	J. Prout	M. Cannon	2/11/06	M. Cannon	D. Broomfield	3/11/06
3	J. Prout	D. Broomfield	17/11/06	M. Cannon	D. Broomfield	17/11/06
4	J. Prout	M. Cannon D.Broomfield	2/1/07	M.Cannon	D. Broomfield K. Brandis	
5	J. Prout	C. McLennan K. Brandis D. Broomfield	11/01/08	J. Prout	K. Brandis D.Broomfield D. Dravnieks (DOIR) B. McKernan (DEC)	14/01/08
6	S. Neill	D. Broomfield P. Stockman W. Ennor	31/08/09	J. Mizera	D. Broomfield B. Chapple & R. DeBari (DMP) P. Stockman S. Neil W. Ennor	25/09/09
7	K. Brandis	S. Neil P. Stockman W. Ennor	12/02/10	J. Mizera	DMP SMC Staff	20/02/10
8	W. Ennor	P. Stockman J. Stott S. Neill	09/07/10	J. Mizera	DMP SMC Staff DEC - Geraldton	23/07/10

TABLE OF CONTENTS

1 INTRODUCTION

This Environmental Management Plan (EMP) addresses potential environmental impacts and management actions relevant to the activities associated with all aspects of Sinosteel Midwest Corporation Limited (SMC) proposed Exploration programs. This document addresses the management procedures required prior to, during, and after exploration activities but does not relate to mining activities.

SMC, its employees and contractors will comply with all Commonwealth and State legislation that apply to its exploration activities.

Compliance with commitments outlined in this document will be internally audited by SMC and subject to external audits by the relevant regulatory agencies, including the Department of Mines and Petroleum (DMP).

2 PROJECT DESCRIPTION

SMC's exploration activities involve a number of drilling programs with the primary objective to drill the strike and depth extensions of potential iron ore bodies within the Mid West region of WA. Priority will be to test those areas with the potential to contain significant resources of economic high-grade iron.

Each lease is expected to be subject to an initial reconnaissance exploration programme of limited duration and a small number of targeted drill holes. Ensuing components of the full exploration program are dependent on the success of earlier stages and may be delayed or omitted. The full reconnaissance program across all leases is anticipated to take up to 24 months to complete.

Key characteristics of the exploration project are:

- Pre-clearance environmental and heritage surveys as required;
- Site preparation, including access, pad development excavation of sumps;
- Construction and use of temporary camp facilities;
- Drilling programs;
- Storage, handling and removal of wastes, hydrocarbons and chemicals; and
- Post exploration rehabilitation.

3 ROLES AND RESPONSIBILITIES

In accordance with this EMP, all activities will be conducted under the supervision of the Exploration Manager or appropriately qualified delegate. The selection of the Exploration Manager will be based upon competence and experience of similar works in sensitive environments.

In addition to drilling program tasks, the role of the Exploration Manager will be to:

- Implement and monitor the effectiveness of the Exploration EMP;
- Ensure environmental training for those involved in activities detailed in environmental management procedures occurs;
- Manage environmental aspects of the project;
- Manage contractors and monitor their compliance with the EMP;
- Facilitate communication with government agencies and stakeholders;
- Investigate incidents and ensure appropriate corrective actions are completed; and
- Report breaches of SMC's environmental commitments to the appropriate government agencies.

Further details of the role and responsibility of the Exploration Manager are detailed throughout the Environmental Management Plan.

4 ENVIRONMENTAL MANAGEMENT PROCEDURES

The environmental management procedures detailed in this EMP form the basis of the operational control procedures for all SMC's exploration activities.

The procedures detail the objectives, management actions, performance indicators, monitoring and reporting requirements for each relevant environmental aspect associated with exploration on SMC's mineral leases.

An annual review of the EMP will be undertaken to ensure currency and effectiveness of management procedures.

EMP-01 Environmental Training

Objective

- To maintain and enhance the environmental awareness of site personnel; and
- To have a workforce that understands and is committed to meeting the environmental expectations and requirements of SMC.

Management

An *Environmental Induction* will be provided to all employees and contractors prior to commencing work. Environmental induction training of the workforce will include:

- SMC's Environmental Policy (Appendix 1);
- Relevant environmental legislation and responsibilities;
- Overview of relevant environmental issues and management procedures including:
  - Inspections,
  - Incident Reporting,
  - Aboriginal Heritage,
  - Fauna,
  - Weed Management,
  - Site Disturbance Permit,
  - Vegetation Clearance,
  - Topsoil,
  - Access Tracks and Drill Pads,
  - Sumps,
  - Drilling Operations,
  - Post Drilling Site Cleanup,
  - Surface Water,
  - Groundwater,
  - Rehabilitation,
  - Vehicle and Equipment Servicing,
  - Hydrocarbon and Chemical Management,
  - Hydrocarbon and Chemical Spills,
  - Camp Management,
  - Putrescible, Intractable and General Waste, and
  - Bushfire Control.
- Training needs will be identified for each environmental management procedure,
- Training will be provided to employees engaged in each procedure.

Performance Indicators

- All new staff and contractors will have undertaken the environmental induction and procedure training where appropriate; and
- Environmental inductions and communications documented and recorded in the Induction and Training Register.

Monitoring

- The Exploration Manager or delegate will record all information relating to induction and training attendance.

EMP-02 Inspections & Audits

Objective

- To reinforce environmentally responsible behaviour;
- To detect and correct at risk situations and practices;
- To verify that the EMP procedures are being implemented, are effective and to provide opportunities for improvement; and
- To regularly assess compliance of performance indicators and monitoring commitments.

Management

- Each procedure will be reviewed and revised as required as part of continual improvement;
- Employ an external consultant to conduct an audit of the EMP and legal compliance annually;
- Ensure any non-conformances are addressed with appropriate corrective actions;
- Conduct quarterly environmental inspections using the Environmental Inspection Form (Appendix 4); and
- Maintain an "Environmental Inspection Register".

Performance Indicators

- **Inspection Schedule** adhered to.
- Audits completed at required intervals.

Monitoring

- The Exploration Manager or delegate will record all environmental inspections and audits.

Reporting

- Environmental inspection reports and internal environmental audits will be reported as required at least annually.

EMP-03 Incident Reporting

Objective

- To document environmental incidents for cause and effect;
- Have a written history of incidents and actions taken and agreed to, for evidentiary purposes; and
- To track and record remedial measures;
- Build awareness in the workforce of situations where incidents could occur
- Provide for continuous improvement in environmental management.

Management

- Appropriate training will be given to all staff and contractors in the incident reporting process;
- Staff and contractors are required to report environmental incidents, near-misses and potential hazards via their supervisor by completing a **Hazard Incident Accident Suggestion Report (HIAS)** (Appendix 5);
- Incidents will be reported immediately;
- Notifiable incidents and emergency events will be reported in accordance with relevant government regulation requirements;
- The severity of spills to ground depends on the spilt agent (e.g. hydrocarbon, drill fluid), volume and the receiving environment. Generally, spills to disturbed ground will be minor and spills on undisturbed ground more significant. Seek advice from your supervisor or environmental staff when required;
- Incidents that require reporting include:
    - Unauthorised clearing,
    - New infestations of pests or weeds,
    - Death of native fauna,
    - Sighting of endangered fauna (e.g. malleefowl),
    - Contamination of ground or surface water,
    - Water/fluid overflow/breach from containment sumps,
    - Major erosion of access tracks,
    - Inundation of water on personnel or infrastructure,
    - Disturbance to existing, or identification of new Aboriginal, or Non-Indigenous Heritage Sites,
    - Fires,
    - Hydrocarbon or chemical spills,
    - Incorrect disposal of waste,
    - Breaches of government regulations or environmental law,
    - All unplanned impacts to the environment.

Definitions

Notifiable Incident: -	an incident that is in breach of law or statutory condition that is required to be notified to the relevant government authority.
Non-notifiable Incident: -	incident that does not require reporting to a public authority but requires the completion of an **Environmental Incident/Non-conformance Report;**

Hazard: -	a condition or practice that has the potential to cause damage, an environmental impact or loss and requires the completion of a **Hazard Report** (Hazard/Issue Report Booklet).

Immediate Response

In the event that an environmental incident occurs, the person to first observe the incident is required to:

- Implement immediate corrective action, if safe to do so, to minimise and/or eliminate the immediate risk to personnel, property, the natural environment and clean-up liability; and
- Verbally report the incident to their supervisor and/or the Exploration Manager or delegate.

Supervisors are required to:

- Ensure that resources are available to bring the incident under effective control; and
- Investigate and report the incident to senior SMC management using an **HIAS Form (Appendix 5).**

Performance Indicators

- All environmental 'near misses', incidents and hazards reported and remedial/preventative actions completed.

Monitoring

- The Exploration Manager or delegate will be responsible for ensuring that incident reporting procedures are followed;
- All incidents will be investigated and analysed to determine and address root causes.

Reporting

- All employees and contractors are responsible for the immediate reporting of all hazards to their supervisor verbally in the first instance;
- SMC has developed a classification system for environmental incidents as detailed in Appendix 6. Categories are summarised below with examples provided in Appendix 6:
  - → Low – Limited damage, minor effect;
  - → Moderate – Medium short-term effect;
  - → Significant – Significant medium-term effect; and
  - → Serious – Serious long-term effect
- All environmental 'near misses', incidents or hazards will be reported to the Exploration Manager or delegate using an **HIAS Form**;
- **HIAS Forms** will be maintained in the HIAS Database in Perth Office ;
- All notifiable incidents will be reported as per regulatory requirements to the Managing Director and the relevant government department; and
- All incidents, both notifiable and non-notifiable are to be reported to the Managing Director in the monthly report by the Exploration Manager or delegate.

EMP-04 Aboriginal Heritage

Objectives

- Avoid disturbance to Aboriginal Heritage sites unless approval has been given under Section 18 of the *Aboriginal Heritage Act* 1972; and
- Ensure protection of known heritage sites.

Management

- Identify known sites.
- Demarcate and avoid known sites.
- Include in site Induction.
- Heritage protection procedures will be adopted through agreement made between Sinosteel SMC and relevant aboriginal stakeholders.
- No disturbance to sites to occur during exploration activities;
- Qualified Anthropologists/Archaeologists will be used as circumstances dictate and require;
- To identify any Aboriginal Heritage sites not currently included on the Aboriginal Sites Register, ethnographic surveys will be undertaken prior to any surface disturbing activities or drilling;
- Any Aboriginal site or suspected sites, which have not previously been identified, will be reported to the Exploration Manager or delegate immediately upon discovery.

Performance Indicators

- Aboriginal Heritage sites avoided; and
- Compliance to Section 18 of the *Aboriginal Heritage Act* 1972.

Monitoring

- Routine monitoring of known Aboriginal Heritage sites will be undertaken by the Exploration Manager or delegate in accordance with EMP-02 Inspections, using an **Environmental Inspection Report** (Appendix 4), to ensure disturbance to these areas has not occurred.

Reporting

- Any new suspected heritage sites will be reported immediately to the site Exploration Manager or delegate;
- Unauthorised interference with identified Aboriginal sites of significance will be reported to the Exploration Manager using an **Environmental Inspection Report**; and
- Representative groups and the Department of Indigenous Affairs will be advised of any suspected new findings and in cases of unauthorised disturbance by Sinosteel Midwest employees and contractors.

EMP-05 Fauna

Objective

- Undertake exploration activities in a manner which minimises the adverse impact to fauna; and
- Ensure that any adverse impacts to threatened species are avoided unless appropriately authorised.

Management

- Vehicles will only use approved access tracks;
- Native fauna will not be captured or intentionally harmed;
- Introduction of feral/domesticated animals will be prohibited;
- Areas found to contain Rare or Endangered species will be avoided, immediately brought to the attention of the Exploration Manager or delegate and advice sought from DEC;
- Disturbed areas will be rehabilitated as soon as practicable to facilitate fauna habitat restoration;
- Non conformances will be reported to Exploration Manager or delegate.

Performance Indicators

- Number of fauna impacts.

Monitoring

- Number of fauna deaths and reason will be recorded.

Reporting

- Where required, a report detailing the status of any specially protected (threatened) fauna will be prepared by the Exploration Manager or delegate and supplied to DEC; and
- Native animal injury/death and reason will be recorded and reported :
    - To DEC, if a threatened species and
    - in annual reports to demonstrate significance improvements (if any) for all fauna impacts.

EMP-06 Weed Management

Objective

- Prevent the transfer of weed species between exploration areas.
- Prevent the introduction of weed species by SMC's (or their contractor's) activities.
- Control and/or reduce any existing infestation of target weed species in exploration areas.

Management

General

- ?;
- Provision of a guide to weeds and their management in Western Australia; and
- During exploration activities, any locations of weed outbreaks will be reported to the Exploration Manager.

Weed Prevention

- No plants or animals will be brought onto the exploration areas by SMC/contractors;
- Disturbance to natural vegetation will occur only as authorised and limited, as far as practicable to limit invasion by introduced species;
- Earthmoving/mobile plant and construction equipment will be washed down and cleaned of all vegetative, soil and rock material, prior to mobilisation to the exploration areas;
- A **Mobilisation Hygiene Certificate** (Appendix 3) will be issued by the Exploration Manager or delegate after inspection on arrival at site; and
- Approval will be required before entering or leaving known weed infested quarantine areas;

Weed Control

- A weed control program will be implemented if target species are found to have been introduced into the area due to SMC activities;
- The standing crop of target species will be reduced by appropriate methods within the vicinity of areas to be affected by exploration activities;
- Quarantine areas encompassing known infestation will be established and demarcated by the Exploration Manager or delegate, location noted, advised to all employees and access prohibited until appropriate action for control/prevention is implemented.
- Spot spraying of emergent weed species within project areas will be carried out to gradually deplete seed stocks and reduce or eliminate any new colonisation, generated by work activities.

Ruby Dock (*Acetosa vesicaria)*

If generated by work activities:

- Ruby Dock plants will have a suitable glyphosphate herbicide, e.g. Roundup, applied; and
- Where practicable, the appropriate herbicide will be applied once *Acetosa v*esicaria is in full foliage and actively growing, and before it sets seed.

Performance Indicators

- A significant flora and weed identification guide made available for all personnel;

• Weed hygiene procedures adopted; • Completed **Mobilisation Hygiene Certificates** will be maintained in **Mobilisation Hygiene Register**; and • No persistent new introductions or spread of weeds.
Monitoring • At the completion of the exploration phase, weed infestation status surveys will be commissioned by SMC using suitably qualified external consultants; • The Exploration Manager or delegate will monitor weed hygiene compliance using the **Mobilisation Hygiene Register**; and • Work sites will be inspected in accordance with EMP-02 Inspections and Audits.
Reporting • New infestations of weeds or pests will be reported as an environmental incident to the Exploration Manager.

EMP-07 Ground Disturbance Permit

Objective

- Communicate, document and authorise any new clearing of vegetation or disturbance to topsoil in order to limit the impact of exploration activities in previously undisturbed areas.

What is a "Ground Disturbance Permit"?

A Ground Disturbance Permit (GDP) is a review of proposed works and how the works may affect surrounding Environment and Aboriginal Heritage values. No ground disturbance works are permitted to proceed in previously undisturbed areas without an approved **Ground Disturbance Permit** (Appendix 2). The review is to include:

- A summary of the proposed works; and
- A sketch map illustrating the location and extent of the works.

When is Ground Disturbance Required?

- A Ground Disturbance Permit is required for:
  - Work that involves disturbance of vegetation and / or topsoil;
  - Work that requires the use of mechanised equipment (as per tenement conditions).
- A Ground Disturbance Permit is not required for work in previously disturbed areas that are under "active" approval (i.e. approval usually lasts for 6 months); and
- A **Ground Disturbance Permit** must be completed and signed off before the scheduled commencement of the works.

Process for the Ground Disturbance Permit:

- The Geologist and/or Exploration Manager/delegate identifies drill target locations on GPS;
- All known locations of Declared Rare Flora (DRF) plants will be tagged with **Blue and Yellow** flagging tape to enable avoidance of disturbance;
- The Geologist and/or Exploration Manager/delegate will provide location details as well as maps and relevant information regarding sensitive areas, heritage sites, and DRF plants to the operators;
- Where required a Botanist will guide (using **Pink and Yellow** flagging tape) the passage of the dozer around known locations of DRF plants;
- The SMC delegate will sight the area and determine the orientation and size of pad based on terrain, rig configuration and approved dimensions for the pad and sumps;
- The Dozer operator will not operate until advised to do so by the Geologist and a Ground disturbance Permit has been completed;
- Clearing proceeds and dimensions/location checked by Geologist and/or Exploration Manager/delegate;
- The **Ground Disturbance Permit** will be submitted to the Geologist and/or Exploration Manager/delegate within the shift of the job completed; and
- Site maps and clearing figures will be updated.

EMP-08 Vegetation Clearance

Objectives

- Minimises new disturbance to vegetation communities;
- Minimises impact on Priority Flora or physical disturbance to Declared Rare flora; and
- Control the spread of weeds into new areas.

Management

- A survey for Priority Flora and Declared Rare Flora (DRF) will be carried out on vegetation to be cleared e.g. vegetation on drill pads and access tracks; this will establish the percentage impact on priority flora and the exact locations of identified species
- The results of the Priority flora and DRF surveys are to be submitted in summary form as a memo and map to adequately support Programme of Works applications;
- Information obtained from surveys on the presence and location of Priority Flora and DRF will be used in planning and managing exploration programmes to avoid and/or minimise impacts on conservation significant flora;
- Before clearing activities commence in previously undisturbed areas an approved Programme of Work and/or Clearing Permit will be obtained as necessary;
- Before clearing activities commence in previously undisturbed areas, approval for clearing will be sought from the Exploration Manager or delegate, a **Ground Disturbance Permit,** EMP-07 Ground Disturbance Permit will be completed and work will be carried out in accordance with EMP-09 Vegetation Clearing Demarcation Standards;
- Vehicles and machinery will only use designated tracks/roads. Off-road traversing will be prohibited;
- All employees/contractors will be inducted on the importance of minimising vegetation clearing and disturbance and weed and management (EMP-01 Environmental Training and EMP-06 Weed Management);
- Mature trees will be avoided where practicable;
- **DRF are protected under legislation and must be avoided by a radius of 50m at all times (Ministerial approval required prior to disturbance of DRF).**
- Any target weed populations identified during the surveys as being a result of exploration activities will be managed as per EMP-06 Weed Management.
- Clearing of slopes near/leading to watercourses will be delayed until construction of the crossing is imminent – minimising erosion and sedimentation risks. **A Bed & Banks Disturbance Permit may be required from Dept of Water prior to any works near/in watercourses**;
- Cleared vegetation will be stockpiled away from streams/creeks;
- Erosion and sedimentation will be minimised by the construction of erosion control bunds;
- Dust control practices will be implemented as necessary e.g. where large areas of vegetation are disturbed resulting in exposed soil;
- Vegetation debris, logs and leaf litter will be retained for reuse during rehabilitation. Topsoil will be stripped and stockpiled or respread immediately in accordance with EMP-10 Topsoil;
- All clearing activities will be scheduled to minimise the time between initial clearing and rehabilitation, unless an extension or exemption from rehabilitation is sought by the Exploration Manager;
- No burning of vegetation spoil will occur;
- Work is to be carried out in accordance with EMP-23 Bushfire Control; and

- A significant flora and weed identification guide will be available for all persons.

Performance Indicators

- All clearing is covered by a PoW / Clearing Permit and /or a Ground Disturbance Permit;
- Vegetation and topsoil direct returned or stockpiled for later use;
- No unauthorised clearing;
- No unauthorised clearing of conservation significant flora;
- No deliberately started fires that were unauthorised; and
- Environmental induction implemented, including Vegetation Clearance Procedures.

Monitoring

The Exploration Manager or delegate will regularly inspect operational areas to ensure:

- Only authorised clearing is being undertaken; and
- Vegetation and topsoil direct returned or stockpiled in suitable locations.

Reporting

- The Exploration Manager or delegate will maintain a register of **Ground Disturbance Permits.**
- The Exploration Manager or delegate will audit and report on the status of clearing and rehabilitation annually.

EMP-09 Vegetation Clearing Demarcation Standards

Objective

- Clearly and unambiguously identify clearing boundaries for site preparatory works.

Management

- An SMC delegate will mark out areas that require clearing;
- Centreline of access tracks will be pegged or flagged;
- Pegs or flagging will be positioned at intervals not exceeding 25 meters; and
- Clearing will not exceed one blade width of the bulldozer.

Performance Indicators

- **Ground Disturbance Permit** approved;
- Clearing boundaries consistent with approved permit; and
- Nil non compliances regarding vegetation clearing.

Monitoring

- Periodic checks of areas approved for clearing will be undertaken by the Exploration Manager or delegate in accordance with EMP-02 Inspections and Audits.

Reporting

- Refer reporting under EMP-08 Vegetation Clearance**;**
- Clearing beyond approved limits will be reported using the **HIAS Form** (Appendix 5)**.**

EMP-10 Topsoil

Objectives

- Manage topsoil as a resource for rehabilitation by maximising the quantity retained and maintaining its viability through appropriate placement and management; and
- Prevention of threats to viability due to adverse impacts such as weed invasion and contamination.

Management

- Following vegetation clearing (EMP-08 Vegetation Clearance) topsoil will be either direct returned to areas available for rehabilitation or formed into dedicated stockpiles on cleared ground;
- Once vegetation is cleared, the upper soil profile (Topsoil) will be stripped and stockpiled no higher than 2 metres in height, clearly signposted and demarcated on site plans;
- Topsoil stripping may be delayed if the risk of soil structure loss is high i.e. after heavy rain; and
- Topsoil and cleared vegetation will be 'direct returned' to areas being rehabilitated. Where this is not possible, topsoil will be stockpiled for later use.
- Where there is no vegetation to be cleared, but topsoil is to be removed the Ground Disturbance Permit will be completed for approval before removing topsoil.

Performance Indicators

- A **Ground Disturbance Permit** is completed after verbal approval of clearing boundaries from Geologist and/or Exploration Manager and prior to commencement of clearing;
- Site clearing complies with EMP-08 Vegetation Clearance and EMP-11 Access Tracks and Drill Pads;
- Topsoil and vegetation direct returned or stockpiled for later use; and
- Open areas are minimised through progressive rehabilitation. (EMP-17 Rehabilitation).

Monitoring

- The Exploration Manager or delegate will regularly inspect operational areas to ensure topsoil is being removed and stockpiled in suitable locations or direct returned to rehabilitation areas.

Reporting

- The area disturbed will be recorded in a **Ground Disturbance and Rehabilitation Register** by the Exploration Manager or delegate.

EMP-11 Access Tracks and Drill Pads

Objective

- To minimise direct and indirect impacts on the flora, fauna and surface water drainage systems from the development and maintenance of access tracks and drill pads.

Management

Planning:

- Where practicable, existing roads and tracks will be used in preference to developing new tracks;
- Routes will be located on the contour as far as possible and practicable;
- Track development along valleys, drainage lines, dense vegetation, natural drainage systems, rough terrain, rocky outcrops, and steep slopes will be avoided as far as practicable;
- Mature trees will be avoided;
- Clearance of vegetation adjacent to and along natural drainage lines will be minimised;
- In areas that have not been cleared previously, the route will be clearly marked by flagging tape to ensure that all relevant employees and contractors know the width and location of proposed track or pad (refer EMP-09 Vegetation Clearing Demarcation Standards);
- DRF plant species must be avoided by a radius of 50m , areas associated with these species will be demarcated by the Exploration Manager or delegate prior to the commencement of any work;
- Heritage sites will not be disturbed, unless approved - these sites will be demarcated by the Exploration Manager or delegate prior to the commencement of any work. (Refer EMP-04 Aboriginal Heritage); and
- A significant flora and weed identification guide made available for all persons.

Mobilisation:

- Clearing will be kept to a minimum required by using equipment suited to the task;
- Access tracks will be constructed to the minimum width possible without threatening driver safety;
- Tracks will avoid unnecessary impact on natural drainage;
- Where possible, clearing will not be carried out for tracks which are intended for 'once-only use';
- Erosion will be prevented by breaking windrows to allow natural runoff;
- Runoff will be directed to the surrounding vegetation and not into drainage lines; and
- Deep cutting into the soil profile will be avoided.
- No unauthorised off track incursions, clearing or damage to tracks (track braiding) will occur on Sinosteel Midwest projects. Where it has occurred it will be rehabilitated immediately.

Drill Site Preparation:

- Machines are to be free of soil and plant propagules on entry to site (EMP-06 Weed Management), and Sinosteel Midwest will provide instruction, supervision, and education of drill crews on environmental commitments and vegetation significance;
- All machine operators will be supervised, especially at start up, and they will understand, be familiar with and comply with all clearing conditions and specifications. Compliance with environmental conditions will be a condition of employment for contractors;
- Gridlines and tracks will be confined to one grading blade or vehicle width;
- Erosion will be minimised by avoiding long, straight tracks and gridlines, and follow contours as much as possible. Tracks will also be constructed under dry soil conditions;

- Sinosteel Midwest will avoid creating windrows of soil and disturbance to topsoil and root stock;
- Drill sites and access tracks will be inspected by DMP following clearing practices, and DMP will be advised as to who is Sinosteel Midwest's supervisor responsible for site clearing;
- Drill pads are to be kept to the minimum possible size required for safe and practical drilling operations;
- Drill pads will be located away from stands of mature vegetation and if possible, pads will be located in an area that requires minimal or no clearing;
- Drill pads will be situated away from drainage lines and watercourses with a suitable buffer zone established (minimum 20 m), and located to avoid direct and indirect impacts (i.e. runoff, dust etc) on sensitive areas;
- Vegetation and topsoil disturbed during the site preparation will be managed in accordance with EMP-08 Vegetation Clearance and EMP-10 Topsoil;
- If a side cut is necessary for drill sites that lie on sloping ground, the pad will be out-sloped to allow for water runoff; and
- Sump preparation procedures are documented under EMP-16 Sumps and Contaminated Water.

Performance Indicators

- A **Ground Disturbance Permit** (Appendix 2) is completed after verbal approval of clearing boundaries from Geologist and/or Exploration Manager/delegate and prior to work commencing in undisturbed areas;
- A significant flora and weed identification guide made available for all persons;
- Area pegged or flagged as per EMP-09 Vegetation Clearing Demarcation Standards;
- Topsoil and vegetation direct returned or stockpiled for later use;
- Site clearing complies with EMP-08 Vegetation Clearance and EMP-10 Topsoil; and
- Progressive rehabilitation of available areas (EMP-17 Rehabilitation).

Monitoring

- The Exploration Manager or delegate will undertake regular inspections to ensure that tracks are established, used and maintained according to the above procedures.

Reporting

- **Ground Disturbance Permits** completed prior to clearing will be submitted to the Geologist and/or Exploration Manager/delegate within the shift of the job completed.
- Non conformance will be reported using the **HIAS form** (Appendix 5)**.**

EMP-12 Drilling Operations

Objective

- To ensure that drilling operations are planned and conducted in a responsible manner that minimises their impact on the environment.

Management

Tendering and Contract Requirements

- When selecting a drilling contractor, the following elements will be considered at the tendering/contract review stage:
  - Drill rigs and support vehicles are suitable for the type of drilling,
  - Inclusion of relevant environmental clauses specified in the drilling contract with appropriate penalties to ensure that these are complied with,
  - The level of implementation and use of any environmental management systems by the contractor,
  - Environmental performance demonstrated with previous mining companies,
  - Previous records for conducting exploration work in a responsible manner,
  - Drill rigs and support vehicles must be cleaned of dirt and seeds prior to arrival on site,
  - Drilling and support vehicles must have fire suppression measures installed.

Drilling

- Frequent preventative maintenance checks will be undertaken on equipment to minimise the chance of hydrocarbon leaks (e.g. from hydraulic lines), leaks will be recorded as part of maintenance procedures. Drilling will be suspended until serious leaks (e.g. >20ltrs in undisturbed ground) have been repaired;
- Only biodegradable drilling additives will be used where ever possible;
- Drilling contractors must have available hydrocarbon containment and clean up materials (e.g. drip trays, absorbent matting) and be familiar with their proper use;
- No litter or waste will be disposed down drill holes; and
- Drilling will be conducted in a manner that minimises dust and noise.

Water Management During Drilling

- Water generated during drilling operations will be reused in the drilling process wherever possible, i.e. if water is struck attempt to utilise this during further drilling at the existing site or those in close proximity;
- The release of any water down-slope or into vegetation, or its entry into drainage channels or improper collection around the rig will be avoided;
- The Electrical Conductivity (EC) of the water will be measured using a Conductivity Meter to determine salinity levels. If identified as being potentially harmful to vegetation (approx. 7ms/cm or 5000ppm TDS) it must be prevented from contacting vegetation; and
- Drilling will be suspended if the groundwater is saline or in significant amounts, until appropriate

and approved containment sumps have been constructed EMP-16 Sumps and Contaminated Water.

Water Containment

- Water used or encountered during drilling activities will be contained;
- Before drilling commences, suitably sited and sized sumps will be constructed for Diamond drill holes, and all Reverse Circulation (RC) drilling in areas where significant and/or saline water is likely to be encountered;
- Small amounts of fresh groundwater encountered during RC drilling may be contained by digging bund walls; and
- Sumps will not be used as a refuse/litter dump.

Sample Management

- Drill samples will be spaced approximately 20cm apart in neat rows to promote the regrowth of grasses and vegetation in between sample piles; and
- If sample bags are used for drilling: -
    - Wherever possible, non-synthetic sample bags will be used (e.g. not green plastic bags),
    - Sample bags will be secured at all times to prevent their loss to wind gusts. Any bags that become wind borne will be retrieved immediately as well as any other windblown litter.

Capping of Drill Holes

- RC and Diamond drill holes will be temporarily 'capped' immediately after drilling until PVC collars are cut and holes permanently plugged during rehabilitation (EMP-17 Rehabilitation). A conical plug will be placed into the collar effectively sealing the hole while allowing the free flow of air so the plug will not blow out.

Material Left in the Drill Hole

- The Exploration Manager will be informed in the event that any material is left in a drill hole; e.g. bogged drill rods or shanked drill bits;
- A record must be made of any material left in a drill hole on the driller daily plod and recorded in the drilling database.

Performance Indicators

- Drilling Contractor is performing to the standards specified in the contract;
- Drill sites are left clean and tidy; and
- There are no adverse environmental impacts as a consequence of the drilling activities.

Monitoring

- Drill sites will be periodically checked as part of site inspection.

Reporting

- A daily log of drilling activities and events will be maintained by the onsite Geologist.
- Any material left in a drill hole will be made on the driller daily plod and recorded in the drilling database.
- Dates for when rehabilitation is due (6 months from completion of drilling) will be recorded in the daily drill log.

EMP-13 Post-Drilling Site Cleanup

Objective

- To ensure that drill sites are left in a clean and safe state and progressively rehabilitated.

Management

- RC and Diamond drill holes will be temporarily 'capped' immediately after drilling, using a conical plug placed into the collar effectively sealing the hole, until the PVC collars can be properly cut and holes permanently plugged during rehabilitation (EMP-17 Rehabilitation);
- The ground will be re-levelled to the pre-drilling contour without leaving a hole or depression;
- The plug will be covered with mounded topsoil. Settling will be allowed for over time, with the plug tapped firmly to shed any future surface run-off;
- Prior to commencing rehabilitation earthworks drill pad sites will be tidied. All evidence of exploration activities will be removed from the site and appropriately disposed of;
- The cleanup will cover all project waste, from general rubbish to contaminated soil;
- All hydrocarbon spills will be cleaned up and all contaminated soil collected and removed from the site as per EMP-20 Hydrocarbon and Chemical Spills;
- Oil absorbent products will be removed from the site and appropriately stored prior to disposal;
- Cyclone spoil, slurry and earthen bunds will be re-levelled and broken up where the surface has been capped, to allow vegetation to re-establish; and
- Sumps used during drilling will be allowed to drain until dry and then will be backfilled.

Inspections

- Inspections will be conducted, in accordance with EMP-02 Inspections & Audits, to ensure drill holes have been plugged, topsoil replaced, drill holes have been mounded and sites have been tidied; and
- Observations, including drainage off drill pads will be carried out to provide specific instructions/requirements to equipment operators during earthworks rehabilitation.

Performance Indicators

- Drill Sites are left clean and tidy;
- Any environmental issues that may require rehabilitation in the future have been noted; and
- Rehabilitation has been completed.

Recording

- The supervising geologist will make a record of the rehabilitation status on the log sheets upon completion of each drill hole; and
- Information is recorded in the drilling database and the Site Disturbance/Rehabilitation Register.

EMP-14 Surface Water

Objective

- Undertake construction and operation activities in a manner which minimises adverse impacts to surface water quality and hydrology.

Management

Hydrology/Watercourses

- Design of access tracks, camp facilities, and drill pads will be done in a manner to minimise interference to natural drainage;
- The establishment and construction of drainage structures will be monitored to ensure compliance with the design specifications;
- Where practicable, construction of watercourse crossings will be scheduled during dry periods **(Bed & Banks permit maybe required);**
- Where practicable, clearing of slopes leading to watercourses will be delayed until construction of the crossing is imminent, thus minimising erosion and sedimentation risk;
- Washing vehicles and equipment will occur only in appropriate and designated locations; and
- Cleared vegetation and topsoil will be stockpiled away from watercourses.

Water Quality

- Water quality samples will be taken if potential contaminants are believed to have reached natural drainage channels. Water sampling will be undertaken in a manner which ensures sample integrity;
- All chemicals stored on-site will be in accordance with Dangerous Goods Regulations. (Refer to section EMP-19 Hydrocarbon and Chemical Management and also EMP-20 Hydrocarbon and Chemical Spills for specific guidelines);
- Servicing of equipment will be undertaken in accordance with EMP-18 Vehicle and Equipment Servicing; and
- Water from drilling operations will be contained in sumps as detailed in EMP-12 Drilling Operations and EMP-16 Sumps and Contaminated Water.

Performance Indicators

- Maintenance program implemented to ensure all drainage structures and erosion control measures are maintained to standard;
- No significant erosion or sedimentation;
- No significant disruption to natural drainage flows;
- Compliance with all relevant DEC licences and sampling guidelines; and
- Water samples acquired to test for potential contaminants will be submitted to NATA certified laboratories for analysis.

Monitoring

- Inspections of sumps, drainage structures and erosion control measures will be carried out as soon as possible after periods of heavy rainfall to assess structural integrity.
- Appropriate records will be kept of all samples taken and sent for analysis.

Reporting

- Major erosion events will be reported immediately by submitting an **HIAS Form** (Appendix 5) to the Exploration Manager or delegate and repair works commenced as soon as possible.

EMP-15 Groundwater

Objective

- Minimise the potential for adverse impact which exploration activity and groundwater extraction may have on groundwater quality.

Management

Quantity

- Monitoring requirements stipulated in DOW Groundwater Licences will be complied with;
- Groundwater extracted will be reused for drilling and exploration activities wherever possible and disposed of in an approved manner; and
- Saline groundwater will be contained as detailed in EMP-12 Drilling Operations and EMP-16 Sumps and Contaminated Water for the protection of surface water.

Quality

- Equipment servicing will be undertaken in accordance with EMP-18 Vehicle and Equipment Servicing;
- Should groundwater be encountered during drilling operations the drill hole, or appropriate sections of it, will be sealed to protect pollution of groundwater, if this is at all possible;
- Water sampling will be undertaken in a manner which ensures sample integrity;
- All chemicals stored on-site will be in accordance with Dangerous Goods Regulations. (Refer to section EMP-19 Hydrocarbon and Chemical Management and also EMP-20 Hydrocarbon and Chemical Spills for specific guidelines); and
- Groundwater management will be undertaken consistent with the DEC approved operating and monitoring strategy if applicable.

Performance Indicators

- Compliance with all relevant DEC licences and monitoring guidelines.

Monitoring

- Groundwater levels at extraction bores will be recorded and reported by the Exploration Manager or delegate (if required) using a **Groundwater Monitoring Register**. The recording frequency may be varied as experience and trends indicate;
- Extraction quantities will be recorded throughout the life of the project by the Exploration Manager or delegate. Results will be recorded (as required) in a **Groundwater Monitoring Register**. The recording frequency may be varied as experience and trends indicate; and
- Water quality sampling will be undertaken by the Exploration Manager or delegate as part of any investigations into suspected contamination.

Reporting

- The Exploration Manager or delegate will ensure compliance with DEC licence monitoring and that reporting requirements are met; and
- The Exploration Manager or delegate will maintain a **Groundwater Monitoring Register**.

EMP-16 Sumps and Contaminated Water

Objective

- Undertake drilling activities in a manner which minimises adverse impacts to the environment from drilling muds/fluids;
- Contain and control contaminated water.

Management

Drilling Muds/Fluids

- Evaporation sumps will be constructed to collect drilling muds and fluids;
- The size of evaporation sumps will be no larger than required for the containment of drilling muds and fluids. Typical size is 3m*3m*1.5m but will need to be larger in areas likely to encounter water whilst drilling (e.g. near creek lines);
- If necessary, evaporation sumps will be lined with an impermeable membrane where discharge material from drilling operations contains saline water;
- Drill rigs will be fitted with containment devices to direct drilling muds/fluids to the evaporation sump; and
- Drill rigs will be fitted with spill response kits for use in the event of spillage of hydrocarbons during discharge of muds/fluids.

Grey Water

- Waste water will be immediately disposed of in a sub-surface grey water leach sump;
- Showers may consist of gravity fed shower bags or similar devices. Waste water will drain to grey water leach sump;
- The grey water leach sump will be located below ground level, away from any identified water courses or bores, and will not interfere with ground water quality;
- The grey water leach sump will be constructed to prevent pooling and designed to be capable of accommodating the total calculated output from the workforce.
- Preference given to the use of free-standing Waste Water Treatment Plant facilities instead of buried septic systems, where justified by camp size and expected time of occupancy.

All Sumps

- Hydrocarbon Spill kits containing both spill mats and loose floorsorb will be located in the vicinity of all operative sumps;
- Oily films/spillage will be removed immediately from sumps in accordance with EMP-20 Hydrocarbon and Chemical Spills and EMP-19 Hydrocarbon and Chemical Management;
- Sumps will be located down slope of the activity site to ensure capture of all run-off;
- Water will be allowed to evaporate before sumps are backfilled;
- Stockpiled substrates will be returned in the reverse order to that of removal (subsoil first followed by topsoil); and
- Sump sites will be scarified and rehabilitated in accordance with EMP-17 Rehabilitation.

Management During the Wet Season

During the Wet Season, it may be impracticable to fully contain surface water run-off due to the volume of rainfall and natural catchments of areas. SMC has committed to reducing its impacts on surface run-off alteration through the following commitments;

- reduction of drill pad size where feasible;
- the use of drilling additives will be minimised;
- where drilling additives are required, only biodegradable compounds will be used; and
- the design and location of water sumps will aim to reduce surface in-flow.

Performance Indicators

- No fauna sump-related deaths recorded;
- Spill kits are located in the vicinity of all operative sumps and oily films/spills managed in accordance with EMP-20 Hydrocarbon and Chemical Spills and EMP-19 Hydrocarbon and Chemical Management;
- No evidence of drilling mud/fluid runoff to undisturbed areas; and
- Progressive rehabilitation of dry sumps (EMP-17 Rehabilitation).

Monitoring

- The construction of each sump will be inspected to ensure that the structure matches acceptable design parameters; and
- Inspections of sumps, drainage structures and erosion control measures will be carried out as soon as possible after periods of heavy rainfall to assess structural integrity.

Reporting

- Major erosion events of sumps will be reported to the Exploration Manager or delegate and remedial works undertaken; and
- Drilling muds/fluids entering adjacent vegetation will be reported to the Exploration Manager or delegate.

EMP-17 Rehabilitation

Objectives

- To meet the tenement conditions with respect to the rehabilitation of exploration sites; and
- To encourage the re-establishment of self-sustaining ecosystems compatible with surrounding undisturbed areas.

Management

Rehabilitation

- Disturbed areas will be rehabilitated within 6 months of completion unless otherwise approved in writing by the responsible officer of the DMP , and will adhere to all PoW and tenement conditions;
- Where practicable, project areas will be progressively rehabilitated to ensure that the rate of rehabilitation is similar to the rate of clearing;
- Long-term visual impact will be minimised by creating landforms which are compatible with the adjacent landscape;
- Reshaped land will be formed so that it is inherently stable, adequately drained and suitable for the desired long-term use;
- Compacted surfaces will be ripped or scarified to a depth of approximately 300mm should ground condition and hydrology allow;
- Where practicable, natural drainage patterns will be reinstated;
- Disturbed areas to be re-covered with topsoil or rock to match adjacent undisturbed areas to a depth of 100mm;
- Local provenance seed and plants may be utilised to boost flora density;
- Management of noxious or environmental weeds in rehabilitated areas will be in accordance with EMP-06 Weed Management;
- Sinosteel Midwest will monitor and manage rehabilitated areas until such time as criteria for relinquishment are met, in accordance with relevant government agencies;
- Sinosteel Midwest will restore the surface profile and prepare the surface to a condition of roughness to resist erosion and accelerate natural revegetation by containing runoff, ensuring infiltration and seed trapping;
- Rehabilitation will be looked at and implemented on a case by case basis. The decision to rehabilitate or otherwise will be documented in the rehabilitation register and made available on request. It may be appropriate to: deep rip, shallow rip, multi-tyne rip, single-tyne rip, scarify, harrow, mini moonscape reshape, seed, leave as-is, or any combination of these;
- As tracks are particularly susceptible to erosion on steep slopes, mini moonscaping will be used where appropriate;
- Disturbance to vegetation and soils will be minimised, through minimising clearing and employing appropriate clearing techniques, and there will be a requirement to rehabilitate disturbances, where the area is not required (EMP-07, EMP-08, EMP-09); and
- Sinosteel Midwest will avoid long continuous rip lines along tracks, especially down slopes, and will control runoff through the use of appropriately spaced bunds.

Drill Hole Rehabilitation (EMP-12 Drilling Operations)

- PVC collars will be removed or broken off below ground level, with the PVC wastes being removed from site;
- Drill holes will be plugged 40cm below the surface of the soil, with an appropriate plug and will be backfilled with soil;
- Sample bags will be removed to a storage area or disposed;
- Drill hole cuttings and drill sites will be raked over and scarified. Some further rehabilitation will be carried out if there is a high visual impact from contrasting cuttings;
- Drill sumps will be backfilled after drying out and rehabilitated. Topsoil will be separated from subsoil at construction to be redeployed after backfilling ; and
- Drill pads will be re-shaped to pre-existing contours and ripped or mini-moonscaped. Topsoil will be removed and stored separately in low piles at construction for redeployment as soon as possible after re-shaping.

Decommissioning

Should Sinosteel Midwest undertake no further related exploration or mining activities beyond the extent of exploration or the life of the granted tenements, the following management procedures will apply:

- All equipment including vehicles and drill rigs will be removed from the tenement;
- All infrastructure, including camp and storage facilities, will be dismantled and removed from the tenement;
- Waste will be removed and disposed of in appropriate licenced facilities – there will be no burial of waste on-site;
- Rehabilitation of impacted areas will be undertaken in accordance with Rehabilitation procedures detailed above;
- Drill holes will be capped below ground level by a plug to prevent erosion and faunal injury/death.

Completion Criteria

- There should be no access tracks apparent which are left to be used by others (unless agreed) and develop into permanent features;
- There should be no actual or potential erosion sites;
- There should be no permanent markers, spoil or litter;
- There should be no open holes, sumps or unstable or visible drill hole collars remaining;
- All disturbed areas should be re-contoured to pre disturbance conditions and prepared for natural plant regeneration when weather permits. Re- contouring should be such that natural water flow is retained or re-established, or that it encourages microtopographical water harvesting;
- There should be no disturbances likely to remain visible from the air where these could be removed by immediate remedial action (e.g. drill spoil, drill collars, steel pegs); and
- Weeds and exotic plant and animal species should neither be introduced nor spread. Treatment must be undertaken, as required, in consultation with DEC or other stakeholders such as the Pastoral Lands Board.

Performance Indicators

- Rehabilitation implemented in adherence to the principles for the rehabilitation of exploration sites;
- Progressive rehabilitation of disturbed areas;
- All drill holes plugged;
- Demobilisation and removal of all equipment, supplies, vehicles, waste and infrastructure associated with the exploration project from the lease; and
- Monitoring of rehabilitated areas at set intervals using standard sampling techniques.

Monitoring

- The Exploration Manager or delegate will routinely inspect rehabilitation areas and maintain a **Site Disturbance and Rehabilitation Register**.

Reporting

- A record of rehabilitation undertaken will be maintained in a **Site Disturbance and Rehabilitation Register**.

EMP-18 Vehicle and Equipment Servicing

Objective

- To minimise impact to the environment arising from the servicing and maintenance of vehicles and equipment;
- To dispose of waste associated with the servicing and maintenance of vehicles and equipment in an environmentally acceptable way.

Management

- If drill rigs or other equipment need refuelling or servicing at the drill pad or other site, all relevant precautions will be taken to minimise the probability of hydrocarbon spills;
- With the exception of tracked equipment, vehicles and equipment will only be cleaned in designated wash down areas using biodegradable or quick break degreaser or detergents;
- Used oil filters, batteries and other waste resulting from minor servicing and maintenance activities will be retained in the appropriate waste receptacles and disposed of in accordance with EMP-22 Waste; and
- Waste oils/liquids, spills and soil contaminated from servicing and maintenance activities will be managed in accordance with EMP-20 Hydrocarbon and Chemical Spills.

Performance Indicators

- Servicing and maintenance of vehicles and equipment occurs in accordance with management procedures;
- Waste generated from servicing and maintenance of vehicles and equipment is stored and disposed of in accordance with EMP-19 Hydrocarbon and Chemical Management, EMP-20 Hydrocarbon and Chemical Spills, and EMP-22 Waste; and
- No long term impact from the occurrence of spills or environmental impact associated with the servicing and maintenance of vehicles and equipment.

Monitoring

- Inspection of areas approved for minor maintenance and servicing of vehicles and equipment be undertaken by the Exploration Manager or delegate;
- All work areas will be inspected in accordance with EMP-02 Inspections & Audits.

Reporting

- Spills or other environmental impacts associated with minor servicing and maintenance of vehicles and equipment will be reported via a HIAS Form.

EMP-19 Hydrocarbon and Chemical Management

Objective

- To minimise the impact of hydrocarbons/chemicals (solvents, cleaning fluids etc) on the local and regional environment through the appropriate use, storage and transport of hydrocarbons and chemicals.

Management

- All chemicals will be approved for use by the Exploration Manager prior to being transported to site;
- Material Safety Data Sheets (MSDS) will be available for all chemicals used on site. Handling, use and storage of chemicals will be compliant with the relevant MSDS;
- Hydrocarbons and chemicals will be stored, used, transported and disposed in accordance with Dangerous Goods Regulations and DMP guidelines;
- Hydrocarbons will be stored in accordance to Australian Standards for the Storage and Handling of Flammable and Combustible Liquids (AS 1940 – 1993) and will be segregated, where required, to ensure that incompatible classes of chemical are not stored together;
- Bunded and lined storage facilities will be located away from watercourses;
- Storage facilities will be equipped with adequate fire control equipment and spill response material/equipment;
- Refuelling and servicing of vehicles will be in accordance with EMP-18 Vehicle and Equipment Servicing;
- Hydrocarbons and chemicals will be transported to work/drill sites by Service Vehicle with secondary containment;
- Drums and containers on the service vehicle will be properly secured to restrict movement and spillage;
- Service Vehicles will have a spill kit on board;
- Temporary storage of chemicals and hydrocarbons will be for no longer than two weeks at drill sites on portable pallet bunds before removal to the designated lay down area; and
- Contractor Emergency Response Plans will be in place and suitable training will be undertaken to ensure swift and effective clean up in the event of contamination of surface and groundwater.

During High Rainfall Events

- Oil films will be removed from the water by floating oil-absorbent booms;
- A pump will be used to evacuate water from a maximum of 150 mm from below the surface;
- Only clean water will be discharged, in accordance with EMP-14 Surface Water; and
- Evacuation of water will be conducted on a regular basis to maintain the capacity of secondary containment facilities.

Disposal

Used hydrocarbons and chemicals;

- Used hydrocarbon containers will be adequately labelled and stored appropriately for future use or disposal;
- Empty drum and containers will be periodically removed from site and disposed or recycled

according to EMP-22 Waste;

- Hydrocarbons and oily wastes (e.g. fuels, greases, de-greaser, emulsified oils and oily waste water) generated on site, will be captured and stored for removal from site by a licenced contractor for safe disposal or recycling;
- Storage facilities for hydrocarbons, oily wastes and chemicals will incorporate secondary containment to protect against failure of individual containers;
- Contaminated soil will be collected and removed from site for disposal and treatment at a licenced Land farm facility; and
- Regular reviews of waste management practices and storage of hydrocarbons and chemicals will be undertaken.

Bulk Hydrocarbon Transfer

- Dry couplings will be used and incorporate auto shut-off valves;
- The transfer system, including couplings, piping and storage tanks will be wholly contained within a lined and bunded area;
- The fuel transfer system will be designed to prevent backflow into the surrounding environment in the event of a pipe or storage tank breach; and
- Spill kits will be located on site at the bulk storage location.

Performance Indicators

- Containers are clearly and appropriately labelled;
- Housekeeping inspections undertaken; and
- The transport, storage, handling and disposal of hydrocarbons/chemicals on site comply with relevant legislation and DMP guidelines.

Monitoring

- Housekeeping inspections will be undertaken by the Exploration Manager or delegate. This will include inspection of storage areas for leaking bunds, drums or containers and inventories of spill response equipment and materials.

Reporting

- Details of quantities and type of hydrocarbons/chemicals entering exploration areas will be recorded by the Exploration Manager or delegate for reporting purposes; and
- Accidental spills will be reported immediately as an environmental incident by completing an **HIAS Form** (Appendix 5). Investigations will be undertaken if required.

EMP-20 Hydrocarbon and Chemical Spills

Scope

- The severity of spills is dependent on:
  - The type of fluid (e.g. hydrocarbon, solvent);
  - The volume of spill;
  - The receiving environment (e.g. disturbed land, waterway)
- Generally, minor hydrocarbon and chemical spills involve less than 205L on pre-disturbed ground.
- Major spills are greater than 205L but often involve less than this amount on undisturbed areas. Seek advice from your supervisor or environmental staff as required.

Objective

- To ensure that minor hydrocarbon and chemical spills are properly contained, treated, transported and disposed; and
- Undertake exploration activities to ensure that the risk of hydrocarbon and chemical spills is minimised.

Management

- Hydrocarbon and Chemical spills will be managed according to the recommendations in the manufacturer's Material Safety Data Sheets (MSDS);
- Training in the use of spill response equipment and materials will be conducted periodically for all Sinosteel Midwest staff and contractor representatives
- Emergency Services will be contacted in the event of a large spill or if hazardous chemicals are involved, where this is possible;
- Hydrocarbon spill response kits will be provided at all work sites;
- The spilt substance will be identified and MSDS obtained;
- The spill will be contained and the leak stopped as soon as possible. This will include blocking the source of the spill, blocking access to waterways and building dams/dykes around the spill;
- If safe to do so, spills will be cleaned up using absorbent materials;
- Soaked absorbent material will be disposed of in prescribed land fill sites;
- Soils contaminated with hydrocarbons will be excavated, sealed and landfarmed at land fill sites;
- Management actions to restock spill kits will be generated;
- The likelihood of the spill recurring will be investigated and steps taken to prevent its recurrence. These measures will be documented and made available to workforce;
- Spills greater than 205 litres will be considered as significant and reported immediately to the Exploration Manager or delegate and Emergency personnel will be called on to coordinate cleanup; and
- Response procedures for spills considered significant will be in accordance with the Emergency Response Plan of the responsible contractor.

Performance Indicators

- Compliance with specified EPA and DEC guidelines;
- Compliance with Contractor Emergency Response Plan; and
- Reporting, investigation and clean up of spills in a prompt and timely manner.

Monitoring • Weekly housekeeping inspections of waste management practices and storage of hydrocarbons and chemicals will be undertaken by the Exploration Manager or delegate. • Inspections will be in accordance with EMP-02 Inspections & Audits.
Reporting • Reporting will be undertaken per EMP-03 Incident Reporting.

EMP-21 Exploration Camp

Objective

- To operate and maintain the Exploration Camp within the scope of appropriate regulations; and
- To have minimum impact upon the surrounding environment as a result of the operation and maintenance of the Exploration Camp.

Location

- Consideration will be given to the following issues in selecting the location for the exploration camp:
  - Utilisation of previously disturbed areas;
  - Grey water and leach drain requirements;
  - Distances from watercourses, in order that camp activities do not impact these natural resources; and
  - Positioned to avoid any significant impacts on vegetation and to ensure that mature trees do not have to be cleared.

Construction

- Prior to construction, all required approvals will be obtained (e.g. Shire, DMP);
- During camp set-up the following will be considered:
  - Blade-up clearing of the site as opposed to clearing of ground vegetation to conserve, root biomass and topsoil;
  - Water runoff and erosion potential of the area once it has been cleared;
  - Possibility of dust problems;
  - Likelihood of contamination of any local surface or groundwater;
  - Preference given to free-standing Waste Water Treatment Plant facilities rather than the use of buried septic systems if justified by camp size and likely duration of occupancy
  - Location of waste storage facilities;
  - Ease of access during construction and operation of the camp; and
  - Location of fuel and oil storage facilities.

Management

- The Exploration Camp will be maintained in such a condition that it is not a hazard to safety or health*;*
- Waste will be managed in accordance with EMP-22 Putrescible, Intractable and General Waste;
- Potable water will be supplied for drinking, cooking, washing and ablution facilities and stored in appropriately sealed containers to prevent ingress of insects and external water; and
- Grey water from the camp facilities will be managed in accordance with the EMP-16 Sumps and Contaminated Water.

EMP-22 Waste Management

Objective

- To minimise the impact of putrescible (food wastes) and intractable waste on the local and regional environment and prevent pollution of the air, land and water ;and
- Ensure putrescible and intractable waste management practices comply with current legislature, industry standards and waste disposal guidelines.

Management

- Vehicles and worksites will have secure (lidded) rubbish containers for the containment of waste to prevent contamination of the site and the spread of windblown litter;
- Camp facilities will have secure (lidded) putrescible waste facilities to prevent access by fauna;
- Littering will not be permitted;
- Oily waste will be managed in accordance with EMP-19 Hydrocarbon and Chemical Management;
- Where possible waste will be re-used or recycled; and
- Housekeeping inspections of facilities will be undertaken by the Exploration Manager or delegate, including the identification of any fire hazards.
- Inert waste that cannot be recycled will be removed to the nearest landfill (within 6 months).

Monitoring

- Housekeeping inspections will be undertaken by the Exploration Manager or delegate. This will include inspecting putrescible and intractable waste storage containers and areas.

Reporting

- General housekeeping and safety inspection audits results will be recorded in safety and environment meeting minutes.

EMP-23 Bushfire Control

Objective

- To prevent bushfires resulting from exploration operations.

Management

- Accidental fires will be avoided;
- Approved fires must be contained within a drum or fire box;
- All vehicles will carry fire fighting equipment complying with the relevant Australian standards and staff will be trained in the use of this equipment;
- Fire fighting equipment will be located at campsite, worksites, and at powered equipment such as generators and pumps;
- Fire safety inspections will be periodically undertaken by the Exploration Manager or delegate using an **Environmental Inspection Form** (Appendix 4);
- An adequate firebreak, in accordance with regulations, will be constructed and maintained around cooking facilities at the exploration camp;
- Drill rigs will have fire extinguishers and efficient exhaust pipes fitted with spark-arresters; and
- Diesel powered vehicles will be used on site, unleaded fuel vehicles fitted with catalytic converters (which operate at high temperatures) will be avoided to reduce the chance of fire.

Performance Indicators

- No accidental fire occurrence;
- Housekeeping inspections undertaken;
- Fire fighting equipment present at stipulated locations on site, in working condition and within date specifications; and
- Details of bushfire frequency and previous bushfire details kept as a current record on site.

Monitoring

- Housekeeping inspections and routine maintenance of fire fighting equipment will be undertaken by the Exploration Manager or delegate;
- All equipment that may cause fires will be inspected and potential fire hazards addressed. Pre-start checks are to be recorded on the appropriate daily inspection form.

Reporting

- Bushfire occurrence, frequency and details will be recorded and maintained on site by the Exploration Manager or delegate on an **Environmental Incident/Non-conformance Register**.
- Accidental fires and local bushfires (naturally started) will be reported in any annual reports required.

5 SUMMARY OF ENVIRONMENTAL MANAGEMENT

The following table summarises the objectives and management measures that will apply to the Project. This information will be provided to the nominated contractors with a contractual requirement to demonstrate that the management measures have been included in the relevant scope of works, such as through the preparation of specific management procedures, and that an adequate budget has been allowed for to implement the procedures.

Table 5.1 Summary of Environmental Management Objectives and Actions

Issue	Objective	Management Actions

Environmental Training	To maintain and enhance the environmental awareness of site personnel.
	
	To have a workforce that understands and is committed to meeting the environmental expectations and requirements of Sinosteel Midwest.
		An *Environmental Induction* will be provided to all employees and contractors prior to commencing work. Environmental induction training of the workforce will include:
		
		• SMC's Environmental Policy (Appendix 1);
		• Relevant environmental legislation and responsibilities;
		• Overview of environmental issues and management procedures including:
		  ○ Inspections,
		  ○ Incident Reporting,
		  ○ Aboriginal Heritage,
		  ○ Fauna,
		  ○ Weed Management,
		  ○ Site Disturbance Permit,
		  ○ Vegetation Clearance,
		  ○ Topsoil,
		  ○ Access Tracks and Drill Pads,
		  ○ Sumps,
		  ○ Drilling Operations,
		  ○ Post Drilling Site Cleanup,
		  ○ Surface Water,
		  ○ Groundwater,
		  ○ Rehabilitation,
		  ○ Vehicle and Equipment Servicing,
		  ○ Hydrocarbon and Chemical Management,
		  ○ Hydrocarbon and Chemical Spills,

Issue	Objective	Management Actions
		○ Camp Management, ○ Putrescible, Intractable and General Waste, and ○ Bushfire Control. • Training needs will be identified for each environmental management procedure, • Training will be provided to employees engaged in each procedure.
Inspections & Audits	To reinforce environmentally responsible behaviour; To detect and correct at risk situations and practices; To verify that the EMP procedures are being implemented, are effective and to provide opportunities for improvement; and To regularly assess compliance of performance indicators and monitoring commitments.	• Each procedure will be reviewed and revised as required as part of continual improvement; • Engage an external consultant to conduct an audit of the EMP and legal compliance annually; • Ensure any non-conformances are addressed with appropriate corrective action; • Conduct quarterly environmental inspections using the Environmental Inspection Form (Appendix 4); . • Maintain an "Environmental Inspection Register".
Incident Reporting	To document environmental incidents for cause and effect; Have a written history of incidents and actions taken and agreed to, for evidentiary purposes; and	• Appropriate training will be given to all staff and contractors in the incident reporting process; • Staff and contractors are required to report environmental incidents, near-misses and potential hazards via their supervisor by completing an **Hazard Incident Accident Suggestion Report (HIAS)** (Appendix 5); • Incidents will be reported immediately; • Notifiable incidents and emergency events will be reported in accordance with relevant government regulation requirements; • The severity of spills to ground depends on the spilt agent (e.g. hydrocarbon, drill fluid), volume and the receiving environment. Generally, spills to disturbed ground will be minor and spills on undisturbed ground more significant. Seek advice from your supervisor or environmental staff when required;

Issue	Objective	Management Actions
	To track and record remedial measures; Build awareness in the workforce of situations where incidents could occur Provide for continuous improvement in environmental management.	• Incidents that require reporting include: ○ Unauthorised clearing, ○ Inappropriate management of or impact to topsoil, ○ New infestations of pests or weeds, ○ Death of native fauna, ○ Sighting of target (endangered) fauna, ○ Contamination of ground or surface water, ○ Failure of containment sumps, ○ Major erosion of access tracks, ○ Impact of overland water flow on personnel or infrastructure, ○ Disturbance to existing, or identification of new Aboriginal, or Non-Indigenous Heritage Sites, ○ Fires, ○ Hydrocarbon or chemical spills, ○ Incorrect disposal of waste, ○ Breaches or potential breaches of government regulations or environmental law, ○ All unplanned impacts to the environment.
Aboriginal Heritage	Avoid disturbance to Aboriginal Heritage sites unless approval has been given under Section 18 of the Aboriginal Heritage Act (1972. Ensure protection of known heritage sites.	• Identify known sites. • Demarcate and avoid known sites. • Include in site Induction. • Heritage protection procedures will be adopted through agreement made between SMC and relevant aboriginal stakeholders. • No disturbance to sites be required during exploration activities; • Qualified Anthropologists/Archaeologists will be used as circumstances dictate and require; • To identify any Aboriginal Heritage sites not currently included on the Aboriginal Sites Register, ethnographic surveys will be undertaken prior to any surface disturbing activities or drilling; • Any Aboriginal site or suspected sites, which have not previously been identified, will be reported to the Exploration Manager or delegate immediately upon discovery
Fauna	Undertake exploration activities in a manner that minimises the adverse impact to fauna Ensure that any adverse impacts to threatened	• Vehicles will only use approved access tracks; • Native fauna will not be captured or intentionally harmed; • Introduction of feral/domesticated animals will be prohibited. • Areas found to contain Rare or Endangered species will be avoided, brought to the attention of the Exploration Manager or delegate and advice immediately sought from DEC; • Disturbed areas will be rehabilitated as soon as practicable to facilitate fauna habitat restoration; and

Issue	Objective	Management Actions
	species are avoided unless appropriately authorised.	• Non conformances will be reported to Exploration Manager or delegate.
Weed Management	Prevent the transfer of weed species between exploration areas. Prevent the introduction of weed species by SMC's (or their contractor's) activities. Control and/or reduce any existing infestation of target weed species in exploration areas.	***General*** • Provision of a guide to weeds and their management in Western Australia. • During exploration activities, any locations of weed outbreaks will be reported to the Exploration Manager. ***Weed Prevention*** • No plants or animals will be brought onto the exploration areas by SMC/contractors; • Disturbance to natural vegetation will occur only as authorised and limited, as far as practicable to limit invasion by introduced species; • Earthmoving/mobile plant and construction equipment will be washed down and cleaned of all vegetative, soil and rock material, prior to mobilisation to the exploration areas; • A **Mobilisation Hygiene Certificate**(Appendix 3) will be issued by the Exploration Manager or delegate after inspection on arrival at site; and • Approval will be required before entering or leaving known weed infested quarantine areas; ***Weed Control*** • A weed control program will be implemented if target species are found to have been introduced into the area due to SMC activities; • The standing crop of target species will be reduced by appropriate methods within the vicinity of areas to be affected by exploration activities; • Quarantine areas encompassing known infestation will be established and demarcated by the Exploration Manager or delegate, location noted, advised to all employees and access prohibited until appropriate action for control/prevention is implemented. • Spot spraying of emergent weed species within project areas will be carried out to gradually deplete seed stocks and reduce or eliminate any new colonisation, generated by work activities. **Ruby Dock (*Acetosa vesicaria)*** If generated by work activities: • Ruby Dock plants will have a suitable glyphosphate herbicide, e.g. Roundup, applied; and • Where practicable, the appropriate herbicide will be applied once *Acetosa v*esicaria is in full foliage and actively growing, and before it sets seed.

Issue	Objective	Management Actions
Ground Disturbance Permit	Communicate, document and authorise any new clearing of vegetation or disturbance to topsoil in order to limit the impact of exploration activities in previously undisturbed areas.	• The Geologist and/or Exploration Manager identifies drill target locations on GPS; • The Geologist and/or Exploration Manager will provide location details as well as maps and relevant information regarding sensitive areas, heritage sites, and rare or priority plants to the Dozer operator; • All known locations of DRF plants will be tagged with **Blue and Yellow** flagging tape to enable avoidance of disturbance; • Where required, a Botanist will guide (using **Pink and Yellow** flagging tape) the passage of the dozer around known locations of DRF plants; • The Dozer operator will cite the area and determine the orientation and size of pad based on terrain and rig configuration; • The Dozer operator will not operate until advised to do so by the Geologist and a Site disturbance Permit has been completed; • Clearing proceeds and is checked by Geologist and/or Exploration Manager; • The **Ground Disturbance Permit** will be submitted to the Geologist and/or Exploration Manager within the shift of the job completed; and • Site maps and clearing figures will be updated.
Vegetation Clearance	Minimises new disturbance to vegetation communities; Avoids impact or physical disturbance to Declared Rare flora; and Control the spread of weeds into new areas.	• Before clearing activities commence in previously undisturbed areas an approved Programme of Work and/or Clearing Permit will be obtained as necessary; • Before clearing activities commence in previously undisturbed areas, approval for clearing will be sought from the Exploration Manager or delegate, a **Ground Disturbance Permit,** EMP-07 Ground Disturbance Permit will be completed and work will be carried out in accordance with EMP-09 Vegetation Clearing Demarcation Standards; • Vehicles and machinery will only use designated tracks/roads. Where practicable, existing roads and tracks will be used in preference to developing new tracks; • All employees/contractors will be inducted on the importance of minimising vegetation clearing and disturbance and weed and management (EMP-01 Environmental Training and EMP-06 Weed Management); • Mature trees will be avoided where practicable; • Declared Rare Flora **(DRF) are protected under legislation and must be avoided by a radius of 50m at all times (Ministerial approval required prior to disturbance of DRF)**. Any target weed populations identified during the surveys as being a result of exploration activities will be managed as per **EMP-06 Weed Management.** • **Clearing of slopes near/leading to watercourses will be delayed until construction of the cro**ssing is imminent – minimising erosion and sedimentation risks. **A Bed & Banks Disturbance Permit may be required from Dept of Water prior to any works near/in watercourses;** • Cleared vegetation will be stockpiled away from streams/creeks; • Erosion and sedimentation will be minimised by the construction of erosion control bunds; • Dust control practices will be implemented as necessary e.g. where large areas of vegetation are disturbed resulting in exposed soil; • Vegetation debris, logs and leaf litter will be retained for reuse during rehabilitation. Topsoil will be stripped and stockpiled or

Issue	Objective	Management Actions
		respread immediately in accordance with EMP-10 Topsoil; • All clearing activities will be scheduled to minimise the time between initial clearing and rehabilitation; • No burning of vegetation spoil will occur; and • Work is to be carried out in accordance with EMP-23 Bushfire Control. • A significant flora and weed identification guide will be available for all persons.
Vegetation Clearing Demarcation Standards	Clearly and unambiguously identify clearing boundaries for site preparatory works	• An SMC representative will be present when marking out areas that require clearing; • Centreline of access tracks will be pegged or flagged; • Pegs or flagging will be positioned at intervals not exceeding 25 meters; and • Clearing will not exceed one blade width of the bulldozer.
Topsoil	Manage topsoil as a resource for rehabilitation by maximising the quantity retained and maintaining its viability through appropriate placement and management;; and Prevention of threats to viability due to adverse impacts such as weed invasion and contamination	• Following vegetation clearing (EMP-08 Vegetation Clearance) topsoil will be either direct returned to areas available for rehabilitation or formed into dedicated stockpiles on cleared ground; • Once vegetation is cleared, the upper soil profile (Topsoil) will be stripped and stockpiled no higher than 1.5 metres in height, clearly signposted and demarcated on site plans; • Topsoil stripping may be delayed if the risk of soil structure loss is high i.e. after heavy rain; and • Topsoil and cleared vegetation will be 'direct returned' to areas being rehabilitated. Where this is not possible, topsoil will be stockpiled for later use. • Where there is no vegetation to be cleared, but topsoil is to be removed the Site Disturbance Permit will be completed for approval before removing topsoil.
Access Tracks and Drill Pads	To minimise direct and indirect adverse impacts on the flora, fauna, vegetation and surface water drainage systems from the development and maintenance of access tracks and drill pads	*Planning*: • Where practicable, existing roads and tracks will be used in preference to developing new tracks; • Routes will be located on the contour as far as possible and practicable; • Track development along valleys, drainage lines, dense vegetation, natural drainage systems, rough terrain, rocky outcrops, and steep slopes will be avoided as far as practicable; • Mature trees will be avoided; • Clearance of vegetation adjacent to and along natural drainage lines will be minimised; • In areas that have not been cleared previously, the route will be clearly marked by flagging tape to ensure that all relevant employees and contractors know the width and location of proposed track or pad (refer EMP-09 Vegetation Clearing Demarcation Standards);

Issue	Objective	Management Actions
		• DRF plant species must be avoided by a radius of 50m, areas associated with these species will be demarcated by the Exploration Manager or delegate prior to the commencement of any work. • Heritage sites will not be disturbed, unless approved - these sites will be demarcated by the Exploration Manager or delegate prior to the commencement of any work. (Refer EMP-04 Aboriginal Heritage);and • A significant flora and weed identification guide made available for all persons. *Mobilisation*: • Clearing will be kept to a minimum required by using equipment suited to the task; • Access tracks will be constructed to the minimum width possible without threatening driver safety; • Tracks will avoid unnecessary impact on natural drainage; • Where possible, clearing will not be carried out for tracks which are intended for 'once-only use'; • Erosion will be prevented by breaking windrows to allow natural runoff; • Runoff will be directed to the surrounding vegetation and not into drainage lines; and • Deep cutting into the soil profile will be avoided. • No unauthorised off track incursions, clearing or damage to tracks (track braiding) will occur on SMC projects. Where it has occurred it will be rehabilitated immediately. *Drill Site Preparation*: • Machines are to be free of soil and plant propagules on entry to site (EMP-06 Weed Management), and SMC will provide instruction, supervision, and education of drill crews on environmental commitments and vegetation significance; • All machine operators will be supervised, especially at start up, and they will understand, be familiar with and comply with all clearing conditions and specifications. Compliance with environmental conditions will be a condition of employment for contractors; • Gridlines and tracks will be confined to one grading blade or vehicle width; • Erosion will be minimised by avoiding long, straight tracks and gridlines, and follow contours as much as possible. Tracks will also be constructed under dry soil conditions; • SMC will avoid creating windrows of soil and disturbance to topsoil and root stock; • Drill sites and access tracks will be inspected by DMP environment following clearing practices, and DMP will be advised as to who is SMC's supervisor responsible for site clearing; • Drill pads are to be kept to the minimum possible size required for safe and practical drilling operations; • Drill pads will be located away from stands of mature vegetation and if possible, pads will be located in an area that requires minimal or no clearing; • Drill pads will be situated away from drainage lines and watercourses with a suitable buffer zone established (minimum 20 m), and located to avoid direct and indirect impacts (i.e. runoff, dust etc) on sensitive areas; • Vegetation and topsoil disturbed during the site preparation will be managed in accordance with EMP-08 Vegetation Clearance and EMP-10 Topsoil;

Issue	Objective	Management Actions
		• If a side cut is necessary for drill sites that lie on sloping ground, the pad will be out-sloped to allow for water runoff; and • Sump preparation procedures are documented under EMP-16 Sumps and Contaminated Water.

Drilling Operations	To ensure that drilling operations are planned and conducted in a responsible manner that minimises their impact on the environment.	*Tendering and Contract Requirements*
		
		• When selecting a drilling contractor, the following elements will be considered at the tendering/contract review stage:
		  ○ Drill rigs and support vehicles are suitable for the type of drilling,
		  ○ Inclusion of relevant environmental clauses specified in the drilling contract with appropriate penalties to ensure that these are complied with,
		  ○ The level of implementation and use of any environmental management systems by the contractor,
		  ○ Environmental performance demonstrated with previous mining companies,
		  ○ Previous records for conducting exploration work in a responsible manner,
		  ○ Drill rigs and support vehicles must be cleaned of dirt and seeds prior to arrival on site,
		  ○ Drilling and support vehicles must have fire suppression measures installed.
		
		Drilling
		
		• Frequent preventative maintenance checks will be undertaken on equipment to minimise the chance of hydrocarbon leaks (e.g. from hydraulic lines), leaks will be recorded as part of maintenance procedures. Drilling will be suspended until serious leaks have been repaired;
		• Only biodegradable drilling additives will be used where ever possible;
		• Drilling contractors must have available hydrocarbon containment and clean up materials (e.g. drip trays, absorbent matting) and be familiar with their proper use;
		• No litter or waste will be disposed down drill holes; and
		• Drilling will be conducted in a manner that minimises dust and noise.
		
		Water Management During Drilling
		
		• Water generated during drilling operations will be reused in the drilling process wherever possible, i.e. if water is struck attempt to utilise this during further drilling at the existing site or those in close proximity;
		• The release of any water down-slope or into vegetation, or its entry into drainage channels or improper collection around the rig will be avoided;
		• The Electrical Conductivity (EC) of the water will be measured using a Conductivity Meter to determine salinity levels. If identified as being potentially harmful to vegetation (approx. 7mS/cm or 5000ppm TDS) it must be prevented from contacting vegetation; and
		• Drilling will be suspended if the groundwater is saline or in significant amounts, until appropriate and approved containment sumps

Issue	Objective	Management Actions
		have been constructed EMP-16 Sumps and Contaminated Water *Water Containment* • Water used or encountered during drilling activities will be contained; • Before drilling commences, suitably sited and sized sumps will be constructed for Diamond drill holes, and all Reverse Circulation (RC) drilling in areas where significant and/or saline water is likely to be encountered; • Small amounts of fresh groundwater encountered during RC drilling may be contained by digging bund walls; and • Sumps will not be used as a refuse/litter dump. *Sample Management* • Drill samples will be spaced approximately 20cm apart in neat rows to promote the regrowth of grasses and vegetation in between sample piles; and • If sample bags are used for drilling: - o Wherever possible, non-synthetic sample bags will be used (e.g. not green plastic bags), o Sample bags will be secured at all times to prevent their loss to wind gusts. Any bags that become wind borne will be retrieved immediately as well as any other wind blown litter. *Capping of Drill Holes* • RC and Diamond drill holes will be temporarily 'capped' immediately after drilling until PVC collars are cut and holes permanently plugged during rehabilitation (EMP-17 Rehabilitation). A conical plug will be placed into the collar effectively sealing the hole while allowing the free flow of air so the plug will not blow out. *Material Left in the Drill Hole* • The Exploration Manager will be informed in the event that any material is left in a drill hole; e.g. bogged drill rods or shanked drill bits; and • A record must be made of any material left in a drill hole on the driller daily plod and recorded in the drilling database.
Post Drilling Site Cleanup	To ensure that drill sites are left in a clean and safe state, and progressively rehabilitated.	• RC and Diamond drill holes will be temporarily 'capped' immediately after drilling, using a conical plug placed into the collar effectively sealing the hole, until the PVC collars can be properly cut and holes permanently plugged during rehabilitation (EMP-17 Rehabilitation); • The ground will be re-levelled to the pre-drilling contour without leaving a hole or depression;

Issue	Objective	Management Actions
		• The plug will be covered with mounded topsoil. Settling will be allowed for over time, with the plug tapped firmly to shed any future surface run-off; • Prior to commencing rehabilitation earthworks drill pad sites will be tidied. All evidence of exploration activities will be removed from the site and appropriately disposed of; • The cleanup will cover all project waste, from general rubbish to contaminated soil; • All hydrocarbon spills will be cleaned up and all contaminated soil collected and removed from the site as per EMP-20 Hydrocarbon and Chemical Spills; • Oil absorbent products will be removed from the site and appropriately stored prior to disposal; • Cyclone spoil, slurry and earthen bunds will be re-levelled and broken up where the surface has been capped, to allow vegetation to re-establish; and • Sumps used during drilling will be allowed to drain until dry and then will be backfilled.
Surface Water	To undertake construction and operation activities in a manner that minimises adverse impacts to surface water quality and hydrology.	*Hydrology/Watercourses* • Design of access tracks, camp facilities, and drill pads will be done in a manner to minimise interference to natural drainage; • The establishment and construction of drainage structures will be monitored to ensure compliance with the design specifications; • Where practicable, construction of watercourse crossings will be scheduled during dry periods **(Bed & Banks Permit maybe required);** • Where practicable, clearing of slopes leading to watercourses will be delayed until construction of the crossing is imminent, thus minimising erosion and sedimentation risk; • Washing vehicles and equipment will occur only in appropriate and designated locations; and • Cleared vegetation and topsoil will be stockpiled away from watercourses. *Water Quality* • Water quality samples will be taken if potential contaminants are believed to have reached natural drainage channels. Water sampling will be undertaken in a manner which ensures sample integrity; • All chemicals stored on-site will be in accordance with Dangerous Goods Regulations. (Refer to section EMP-19 Hydrocarbon and Chemical Management and also EMP-20 Hydrocarbon and Chemical Spills for specific guidelines); • Servicing of equipment will be undertaken in accordance with EMP-18 Vehicle and Equipment Servicing; and • Water from drilling operations will be contained in sumps as detailed in EMP-12 Drilling Operations and EMP-16 Sumps and Contaminated Water.
Groundwater	To minimise the adverse impact that exploration and groundwater	*Quantity* • Monitoring requirements stipulated in DOW Groundwater Licences will be complied with; • Groundwater will be used for drilling and exploration activities, and disposed of in an approved manner; and

Issue	Objective	Management Actions
	extraction may have on groundwater quality.	• Saline groundwater will be contained as detailed in EMP-12 Drilling Operations and EMP-16 Sumps and Contaminated Water for the protection of surface water. *Quality* • Equipment servicing will be undertaken in accordance with EMP-18 Vehicle and Equipment Servicing; • Should groundwater be encountered during drilling operations the drill hole, or appropriate sections of it, will be sealed to protect pollution of groundwater, if this is at all possible; • Water sampling will be undertaken in a manner which ensures sample integrity; • All chemicals stored on-site will be in accordance with Dangerous Goods Regulations. (Refer to section EMP-19 Hydrocarbon and Chemical Management and also EMP-20 Hydrocarbon and Chemical Spills for specific guidelines); and • Groundwater management will be undertaken consistent with the DEC approved operating and monitoring strategy if applicable.
Sumps and Contaminated Water	To undertake drilling activities in a manner that minimises adverse impacts to the environment from drilling muds/fluids. To contain and control contaminated water.	*Drilling Muds/Fluids* • Evaporation sumps will be constructed to collect drilling muds and fluids; • The size of evaporation sumps will be no larger than required for the containment of drilling muds and fluids Typical size is 3m*3m*1.5m but will ned to be larger in areas likely to encounter water whilst drilling (e.g. near creek lines); • If necessary, evaporation sumps will be lined with an impermeable membrane where discharge material from drilling operations contains saline water; • Drill rigs will be fitted with containment devices to direct drilling muds/fluids to the evaporation sump; and • Drill rigs will be fitted with spill response kits for use in the event of spillage of hydrocarbons during discharge of muds/fluids. *Grey Water* • Waste water will be immediately disposed of in a sub-surface grey water leach sump; • Showers may consist of gravity fed shower bags or similar devices. Waste water will drain to grey water leach sump; • The grey water leach sump will be located below ground level, away from any identified water courses or bores, and will not interfere with ground water quality.; • The grey water leach sump will be constructed to prevent pooling and designed to be capable of accommodating the total calculated output from the workforce. • Preference given to the use of free-standing Waste Water Treatment Plant facilities instead of buried septic systems, where justified by camp size and expected time of occupancy. *All Sumps* • Hydrocarbon Spill kits containing both spill mats and loose floorsorb will be located in the vicinity of all operative sumps; • Oily films/spillage will be removed immediately from sumps in accordance with Refer to section EMP-19 Hydrocarbon and Chemical

Issue	Objective	Management Actions
		Management and also EMP-20 Hydrocarbon and Chemical Spills for specific guideline; • Sumps will be located down slope of the activity site to ensure capture of all run-off; • Water will be allowed to evaporate before sumps are backfilled; • Stockpiled substrates will be returned in the reverse order to that of removal (subsoil first followed by topsoil); and • Sump sites will be scarified and rehabilitated in accordance with EMP-17 Rehabilitation. *Management During the Wet Season* During the Wet Season, it may be impracticable to fully contain surface water run-off due to the volume of rainfall and natural catchments of areas. SMC has committed to reducing its impacts on surface run-off alteration through the following commitments; • reduction of drill pad size where feasible; • the use of drilling additives will be minimised; • where drilling additives are required, only biodegradable compounds will be used; and • the design and location of water sumps will aim to reduce surface in-flow.
Rehabilitation	To meet the tenement conditions with respect to the rehabilitation of exploration sites. To encourage the re-establishment of self-sustaining ecosystems compatible with surrounding undisturbed areas.	*Rehabilitation* • Disturbed areas will be rehabilitated within 24 months of completion unless otherwise approved in writing by the responsible officer of the Department of Industry and Resources , and will adhere to all PoW and tenement conditions; • Where practicable, project areas will be progressively rehabilitated to ensure that the rate of rehabilitation is similar to the rate of clearing; • Long-term visual impact will be minimised by creating landforms which are compatible with the adjacent landscape; • Reshaped land will be formed so that it is inherently stable, adequately drained and suitable for the desired long-term use; • Compacted surfaces will be ripped or scarified to a depth of approximately 300mm should ground condition and hydrology allow; • Where practicable, natural drainage patterns will be reinstated; • Disturbed areas to be re-covered with topsoil or rock to match adjacent undisturbed areas to a depth of 100mm; • Local provenance seed and plants may be utilised to boost flora density; • Management of noxious or environmental weeds in rehabilitated areas will be in accordance with EMP-06 Weed Management; • SMC will monitor and manage rehabilitated areas until such time as criteria for relinquishment are met, in accordance with relevant government agencies; • SMC will restore the surface profile and prepare the surface to a condition of roughness to resist erosion and accelerate natural revegetation by containing runoff, ensuring infiltration and seed trapping; • Rehabilitation will be looked at and implemented on a case by case basis. The decision to rehabilitate or otherwise will be

Issue	Objective	Management Actions
		documented in the rehabilitation register and made available on request. It may be appropriate to: deep rip, shallow rip, multi-tyne rip, single-tyne rip, scarify, harrow, mini moonscape reshape, seed, leave as-is, or any combination of these; • As tracks are particularly susceptible to erosion on steep slopes, mini moonscaping will be used where appropriate; • Disturbance to vegetation and soils will be minimised, through minimising clearing and employing appropriate clearing techniques, and there will be a requirement to rehabilitate disturbances, where the area is not required (EMP-07, EMP-08, EMP-09); and • SMC will avoid long continuous rip lines along tracks, especially down slopes, and will control runoff through the use of appropriately spaced bunds. *Drill Hole Rehabilitation* (EMP-12 Drilling Operations) • PVC collars will be removed or broken off below ground level, with the PVC wastes being removed from site; • Drill holes will be plugged 40cm below the surface of the soil, with an appropriate plug and will be backfilled with soil; • Sample bags will be removed to a storage area or disposed; • Drill hole cuttings and drill sites will be raked over and scarified. Some further rehabilitation will be carried out if there is a high visual impact from contrasting cuttings; • Drill sumps will be backfilled after drying out and rehabilitated. Topsoil will be separated from subsoil at construction to be redeployed after backfilling ; and • Drill pads will be re-shaped to pre-existing contours and ripped or mini-moonscaped. Topsoil will be removed and stored separately in low piles at construction for redeployment as soon as possible after re-shaping. *Decommissioning* Should SMC undertake no further related exploration or mining activities beyond the extent of exploration or the life of the granted tenements, the following management procedures will apply: • All equipment including vehicles and drill rigs will be removed from the tenement; • All infrastructure, including camp and storage facilities, will be dismantled and removed from the tenement; • Waste will be removed and disposed of in appropriate licenced facilities – there will be no burial of waste on-site; • Rehabilitation of impacted areas will be undertaken in accordance with Rehabilitation procedures detailed above; • Drill holes will be capped below ground level by a plug to prevent erosion and faunal injury/death. *Completion Criteria* • There should be no access tracks apparent which are left to be used by others (unless agreed) and develop into permanent features; • There should be no actual or potential erosion sites;

Issue	Objective	Management Actions
		• There should be no permanent markers, spoil or litter; • There should be no open holes, sumps or unstable or visible drill hole collars remaining; • All disturbed areas should be re-contoured to pre disturbance conditions and prepared for natural plant regeneration when weather permits. Re- contouring should be such that natural water flow is retained or re-established, or that it encourages microtopographical water harvesting; • There should be no disturbances likely to remain visible from the air where these could be removed by immediate remedial action (e.g. drill spoil, drill collars, steel pegs); and • Weeds and exotic plant and animal species should neither be introduced nor spread. Treatment must be undertaken, as required, in consultation with DEC or other stakeholders such as the Pastoral Lands Board.
Vehicle and Equipment Servicing	To minimise impact to the environment arising from the servicing and maintenance of vehicles and equipment. To dispose of waste associated with the servicing and maintenance of vehicles and equipment in an environmentally acceptable way.	• If drill rigs or other equipment need refuelling or servicing at the drill pad or other site, all relevant precautions will be taken to minimise the probability of hydrocarbon spills; • With the exception of tracked equipment, vehicles and equipment will only be cleaned in designated wash down areas using biodegradable or quick break degreaser or detergents; • Used oil filters, batteries and other waste resulting from minor servicing and maintenance activities will be retained in the appropriate waste receptacles and disposed of in accordance with EMP-22 Waste; and • Waste oils/liquids, spills and soil contaminated from servicing and maintenance activities will be managed in accordance with EMP-20 Hydrocarbon and Chemical Spills.
Hydrocarbon and Chemical Management	To minimise the impact of hydrocarbons/chemicals (solvents, cleaning fluids etc) on the local and regional environment through the appropriate use, storage and transport of hydrocarbons and chemicals.	• All chemicals will be approved for use by the Exploration Manager prior to being transported to site; • Material Safety Data Sheets (MSDS) will be available for all chemicals used on site. Handling, use and storage of chemicals will be compliant with the relevant MSDS; • Hydrocarbons and chemicals will be stored, used, transported and disposed in accordance with Dangerous Goods Regulations and DMP guidelines; • Hydrocarbons will be stored in accordance to Australian Standards for the Storage and Handling of Flammable and Combustible Liquids (AS 1940 – 1993) and will be segregated, where required, to ensure that incompatible classes of chemical are not stored together; • Bunded and lined storage facilities will be located away from watercourses; • Storage facilities will be equipped with adequate fire control equipment and spill response material/equipment; • Refuelling and servicing of vehicles will be in accordance with EMP-18 Vehicle and Equipment Servicing; • Hydrocarbons and chemicals will be transported to work/drill sites by Service Vehicle with secondary containment;

Issue	Objective	Management Actions
		• Drums and containers on the service vehicle will be properly secured to restrict movement and spillage; • Service Vehicles will have a spill kit on board; • Temporary storage of chemicals and hydrocarbons will be for no longer than two weeks at drill sites on portable pallet bunds before removal to the designated lay down area; and • Contractor Emergency Response Plans will be in place and suitable training will be undertaken to ensure swift and effective clean up in the event of contamination of surface and groundwater. **During High Rainfall Events** • Oil films will be removed from the water by floating oil-absorbent booms; • A pump will be used to evacuate water from a maximum of 150 mm from below the surface; • Only clean water will be discharged, in accordance with EMP-14 Surface Water; and • Evacuation of water will be conducted on a regular basis to maintain the capacity of secondary containment facilities. **Disposal** *Used hydrocarbons and chemicals;* • Used hydrocarbon containers will be adequately labelled and stored appropriately for future use or disposal; • Empty drum and containers will be periodically removed from site and disposed or recycled according to EMP-22 Waste; • Hydrocarbons and oily wastes (e.g. fuels, greases, de-greaser, emulsified oils and oily waste water) generated on site, will be captured and stored for removal from site by a licenced contractor for safe disposal or recycling; • Storage facilities for hydrocarbons, oily wastes and chemicals will incorporate secondary containment to protect against failure of individual containers; • Contaminated soil will be collected and removed from site for disposal and treatment at a licenced Land farm facility; and • Regular reviews of waste management practices and storage of hydrocarbons and chemicals will be undertaken. **Bulk Hydrocarbon Transfer** • Dry couplings will be used and incorporate auto shut-off valves; • The transfer system, including couplings, piping and storage tanks will be wholly contained within a lined and bunded area; • The fuel transfer system will be designed to prevent backflow into the surrounding environment in the event of a pipe or storage tank breach; and • Spill kits will be located on site at the bulk storage location.
Hydrocarbon and Chemical Spills	To ensure that minor hydrocarbon and chemical spills are properly contained, treated,	• Hydrocarbon and Chemical spills will be managed according to the recommendations in the manufacturer's Material Safety Data Sheets (MSDS); • Training in the use of spill response equipment and materials will be conducted periodically for all Sinosteel Midwest staff and contractor representatives

Issue	Objective	Management Actions
	transported and disposed; and Undertake exploration activities to ensure that the risk of hydrocarbon and chemical spills is minimised.	• Emergency Services will be contacted in the event of a large spill or if hazardous chemicals are involved, where this is possible; • Hydrocarbon spill response kits will be provided at all work sites; • The spilt substance will be identified and MSDS obtained; • The spill will be contained and the leak stopped as soon as possible. This will include blocking the source of the spill, blocking access to waterways and building dams/dykes around the spill; • If safe to do so, spills will be cleaned up using absorbent materials; • Soaked absorbent material will be disposed of in prescribed land fill sites; • Soils contaminated with hydrocarbons will be excavated, sealed and landfarmed at land fill sites; • Management actions to restock spill kits will be generated; • The likelihood of the spill recurring will be investigated and steps taken to prevent its recurrence. These measures will be documented and made available to workforce; • Spills greater than 205 litres will be considered as significant and reported immediately to the Exploration Manager or delegate and Emergency personnel will be called on to coordinate cleanup; and • Response procedures for spills considered significant will be in accordance with the Emergency Response Plan of the responsible contractor.
Exploration Camp	To operate and maintain the Exploration Camp within the scope of appropriate regulations; and To have minimum impact upon the surrounding environment as a result of the operation and maintenance of the Exploration Camp.	**Location** • Consideration will be given to the following issues in selecting the location for the exploration camp: ○ Utilisation of previously disturbed areas; ○ Grey water and leach drain requirements; ○ Distances from watercourses, in order that camp activities do not impact these natural resources; and ○ Positioned to avoid any significant impacts on vegetation and to ensure that mature trees do not have to be cleared. **Construction** • Prior to construction, all required approvals will be obtained (e.g. Shire, DMP); • During camp set-up the following will be considered: ○ Blade-up clearing of the site as opposed to clearing of ground vegetation to conserve, root biomass and topsoil; ○ Water runoff and erosion potential of the area once it has been cleared; ○ Possibility of dust problems; ○ Likelihood of contamination of any local surface or groundwater; ○ Preference given to free-standing Waste Water Treatment Plant facilities rather than the use of buried septic systems if justified by camp size and likely duration of occupancy; ○ Location of waste storage facilities; ○ Ease of access during construction and operation of the camp; and ○ Location of fuel and oil storage facilities.

Issue	Objective	Management Actions
		Operation • The Exploration Camp will be maintained in such a condition that it is not a hazard to safety or health; • Waste will be managed in accordance with EMP-22 Putrescible, Intractable and General Waste; • Potable water will be supplied for drinking, cooking, washing and ablution facilities and stored in appropriately sealed containers to prevent ingress of insects and external water; and • Grey water from the camp facilities will be managed in accordance with the EMP-16 Sumps and Contaminated Water.
Putrescible, Intractable and General Waste	To minimise the impact of putrescible and intractable waste on the local and regional environment and prevent pollution of the air, land and water. To ensure putrescible and intractable waste management practices comply with current legislature, industry standards and waste disposal guidelines.	• Vehicles and worksites will have secure (lidded) rubbish containers for the containment of waste to prevent contamination of the site and the spread of windblown litter; • Camp facilities will have secure (lidded) putrescible waste facilities to prevent access by fauna; • Littering will not be permitted; • Oily waste will be managed in accordance with EMP-19 Hydrocarbon and Chemical Management; • Where possible waste will be re-used or recycled; and • Housekeeping inspections of facilities will be undertaken by the Exploration Manager or delegate, including the identification of any fire hazards. • Inert waste that cannot be recycled will be removed to the nearest landfill (within 6 months).
Bushfire Control	To prevent bushfires resulting from exploration operations.	• Accidental fires will be avoided; • Approved fires must be contained within a drum or fire box; • All vehicles will carry fire fighting equipment complying with the relevant Australian standards and staff will be trained in the use of this equipment; • Fire fighting equipment will be located at campsite, worksites, and at powered equipment such as generators and pumps; • Fire safety inspections will be periodically undertaken by the Exploration Manager or delegate using an **Environmental Inspection Form** (Appendix 4); • An adequate firebreak will be constructed and maintained around cooking facilities at the exploration camp; • Drill rigs will have fire extinguishers and efficient exhaust pipes fitted with spark-arresters; and

Issue	Objective	Management Actions
		• Diesel powered vehicles will be used on site, unleaded fuel vehicles fitted with catalytic converters (which operate at high temperatures) will be avoided to reduce the chance of fire.

6 REFERENCES

Minerals Council of Australia (1989). *Mine Rehabilitation Handbook*. Australian Mining Industry Council, Braddon, ACT.

ANZMEC (2000). *Strategic Framework for Mine Closure*. Australian and New Zealand Minerals and Energy Council and Minerals Council of Australia. Canberra, ACT

Department of Environment (1996a). *Code of Practice for Country Landfills*. Department of Environmental Protection, Perth, Western Australia

Department of Environment (1996b*), Landfill Waste Classification and Waste Definitions*. Department of Environmental Protection, Perth, Western Australia.

Department of Environment (2000). *Water Quality Protection Guidelines No. 5 Mining and Mineral Processing – Minesite Water Quality Monitoring*, Water and Rivers Commission, Perth, Western Australia.

Department of Environment (2001). *Reporting of known of Suspected Contaminated Sites,* Department of Environmental Protection, Perth Western Australia

Department of Industry and Resources (2001). *Environmental Notes on Mining – Waste Rock Dumps*. Department of Minerals and Energy, Perth, Western Australia.

Department of Industry and Resources (various). *Guidelines - Dangerous Goods Transport and Storage.* Department of Minerals and Energy, Perth, Western Australia.

Environmental Protection Authority (1990). *Oil Farming for Oily Wastes – A Guide for Users*. Technical Series No. 37. Environmental Protection Authority, Perth, Western Australia

Standards Australia. (1993). *The Storage and Handling of Flammable and Combustible Liquids (AS 1940 - 1993)*. Standards Australia, Homebush, New South Wales.

7 Appendices

Appendix 1

7.1 Environmental Policy

Environmental Policy

Sinosteel Midwest Corporation Ltd (SMC) shares the community's desire to both develop resources and protect and preserve the environment.

All SMC activities will meet statutory requirements as a minimum standard and be planned and performed so that adverse effects on the environment are either avoided or appropriately managed.

In fulfilling this policy, SMC will:

- Establish a set of policies, objectives and commitments for all activities;
- Identify its legal environmental responsibilities and comply with all applicable laws and regulations;
- Develop and apply responsible management where laws and regulations do not exist;
- Assess potential environmental impacts before conducting new activities;
- Institute a management system that, amongst other aspects, identifies environmental responsibilities for all its employees and contractors;
- Design and implement a system of work procedures and training programs that will encourage concern and respect for the environment prevent and/or reduce pollution and allow its employees and contractors to know exactly how they are to achieve their environmental objectives and discharge their environmental responsibilities.
- Implement monitoring and auditing systems that will ensure the company's environmental commitments and objectives are being achieved; and
- Develop and foster a corporate culture that encourages continuous improvement in environmental performance.

Sijun ("Tony") Cheng
Managing Director
September 2009

7.2 Application for Ground Disturbance Permit

Page 1 of 1	**Ground Disturbance Permit**		**Sinosteel Midwest Corporation**
Date		**Time**	
Originator/Contractor			
Project Area:			
Location:			
Area of Disturbance (ha):			
Volume of topsoil to be recovered (m^3):			
Reason for Disturbance			
❑ Access Track	❑ Power/Water Easement	❑ Topsoil stockpile	❑ Drill Pad
❑ Laydown	❑ Other:		
Description of proposed activity (attach plan, maps &/or photos if appropriate)			
To be filled in by Exploration Manager			
❑ Check area is within approved exploration area			
❑ Government approval, if required			
❑ Rare flora/fauna protected			
❑ Archaeological and anthropological survey of area completed			
❑ Aboriginal sites demarcated			
❑ Adequate pollution prevention safeguards in place.			
❑ Clearing boundary demarcated to standard			
Environmental Conditions			
Approval			
Approved by:		Date:	
Signature			

Appendix 3

7.3 Mobilisation Hygiene Certificate

Page 1 of 1	**MOBILISATION HYGIENE CERTIFICATE**	**Sinosteel Midwest Corporation**

Date:		**Contractor**					
Contract Number		**Address**					
Purchase Number		**Phone Number**		**Fax Number**		**Site Contact**	
Location of Equipment Usage							

UNIT NO.	**EQUIPMENT DESCRIPTION** (Please complete as comprehensively as possible for each unit)	**Registration No.**	**Location of last works undertaken by equipment**	**Date Cleaned**

Certified	
Signature	
Position	
Date	

Appendix 4

7.4 Environmental Inspection Report

Environmental Inspection Report

Sinosteel Midwest Corporation

Note: Bring along previous inspection record for verification of corrective actions

Site		**Inspection Date**	
Location		**Inspector/s**	

ASPECT	Action required (Yes or No)	Comments/Actions Required	Related non conformance
Landscape			
Geological Features			
Topsoil			
Erosion / Erosion control berms			
Vegetation			
Rehabilitated areas			
Weeds			
Flora			
Fauna			
Water / Drainage structures			
Aboriginal Heritage			
Pollution Prevention			
Saline Water			
Sumps			
Dust / haul road dust suppression			
Chemical storage			
Hydrocarbon storage			
Barge-to-Land hydrocarbon transfer points			
Spillage of hazardous materials			
Drill Rig Condition			
Solid Waste / Waste Recycling			
Hazardous Waste			
Litter			
General house keeping			
Environmental Management Systems			
Procedures			
Incident Reports			
Inspections/Audits			
Records			
Awareness			
Training			
Other			
Fire fighting equipment/Machinery			
Signs and Barriers			
Safety Bunds / fences			
Created landforms			
Disturbed areas for rehabilitation			

Actions from previous inspections have been addressed ☐ **Yes** ☐ **No**

Non-conformance has been raised (Complete Incident and Non Conformance Form) ☐

Appendix 5

7.5 Hazard Incident Accident Suggestion (HIAS) Report Form

中钢澳洲中西矿业公司
SINOSTEEL MIDWEST CORPORATION LIMITED

HIAS REPORT Number Sinosteel Site Ref
Fax/ email (white Copy) to Sinosteel OH&S

DATE:

Type of HIAS Report ☐ OH&S HIAS ☐ Environmental Event

☐Hazard ☐Incident (near miss) ☐Accident ☐Suggestion ☐Event (Environment Only)

Will this Incident be subject to a Comprehensive Investigation ☐YES ☐NO

OH&S Classification
- ☐ First Aid
- ☐ Medical Treatment
- ☐ Restricted Work Injury
- ☐ Lost Time Injury
- ☐ Significant Incident

Environment Classification
- ☐ Breach
- ☐ Disturbance
- ☐ Damage

DETAILS -***What*** Happened (Describe your Suggestion / Hazard)

Name of Person Making Report / Employer: .	Contact Details(ph) .
Name of Injured Person / Employer: .	Contact Details(ph) .
Name(s) of Witnesses / Employer: .	Contact Details(ph) .

Provide details of the Injury and the treatment given or Incident action for environmental events (Includ the name of person performing treatment / action). If the Injured person was taken off site for treatment, provide details of where they were taken:

.

Location (Site) ☐ Weld Range ☐ Jack Hills ☐ Robinson Range ☐ Koolanooka / Blue Hills ☐ Other

Where on site did the Incident Occur:

Immediate Remedial Actions (What was done immediately after the Accident / Environmental event)

☐ Worked Stopped ☐ Toolbox Meeting Conducted ☐ Work Method Changed ☐ Environment Remediated

Suggested Remedial Actions

Immediate Manager / Supervisor notified- Signature.	**Name and Signature of Immediate Supervisor / Senior Site Manager**	
	Name	**Signature**

Appendix 5

7.6 Classification of Environmental Incidents

Classification of Environmental Incidents

Classification	Definition	Examples
Low	**Limited damage, minor effect:** ▪ **Temporary on site release immediately contained, causing negligible to low level contamination or damage** ▪ **damage or contamination that is immediately reversible** ▪ **non-compliance with internal procedures** ▪ **an environmental hazard which has not led to an incident**	• A small hydrocarbon spill, on cleared area or hard stand, which is easily cleaned up. • Leak or spill into a contained bunded area. • Fauna death of a non-endangered species • Elevated dust which has not left site. • Temporary release of clean water into vegetation. • Non-compliance with internal environmental procedure resulting in low risk of impact. Non-compliance with environmental procedure could include; • Failure to obtain ground disturbance permit prior to vegetation clearing. • Unauthorised driving off roads/tracks. • Litter/rubbish left at site. • Hydrocarbon containers stored outside of bunded area. • Breach of weed hygiene with low risk of spread.
Moderate	**Moderate short term effect:** ▪ **medium contamination or damage that is reversible in the short term** ▪ **all contamination recovered or eliminated in a short period of time** ▪ **breach of regulatory condition**	• Turbid or poor quality water released into vegetation or creek line (e.g drilling fluid, overflow from sump). • A hydrocarbon spill on uncleared area cleaned up promptly. • Unauthorised driving off roads/tracks resulting in damage to previously undisturbed area (e.g. surface wheel ruts, erosion, loss of topsoil) • Regulatory non compliance (e.g. dust emissions extending beyond lease boundary). • Repeated deaths of non-endangered fauna • Unnecessary removal of Priority Flora species • Litter/rubbish over large areas of operation • Erosion of topsoil from stockpiles, areas of vegetation or rehabilitation areas.
Significant	**Significant medium term effect:** ▪ **Significant contamination or damage that is recoverable in the medium term** ▪ **Damage or contamination reversible in the medium term** ▪ **Breach of legislation with potential to impact negatively on reputation**	▪ A hydrocarbon spill on undisturbed ground that is not readily cleaned up (e.g. may require more than a week to be remediated). ▪ Saline / hypo saline water release into native vegetation or creek line (e.g. from drilling or sump overflow/breach). ▪ Unauthorised clearing of native vegetation (i.e. no regulatory approval where required). Includes Declared Rare Flora (DRF). ▪ Hazardous chemical spill outside of primary containment area requiring prompt recovery. • Fauna death of a endangered species ▪ Severe erosion from areas of vegetation or rehabilitation, which exposes vegetation surface roots. ▪ Any bush fire started by the operation that is adequately controlled. ▪ Groundwater contamination plume which is recoverable over time. ▪ Overtopping of hazardous material from tails dam, with all contamination contained on-site and recovered.
Serious	**Serious long term effect:** ▪ **severe damage or contamination that is recoverable only in the long term** ▪ **damage or contamination will take a long time period to remediate** ▪ **serious reputational damage as a result**	▪ Spill into water way causing death of aquatic life and/or ecosystem ▪ Large hydrocarbon spill into ground which affects large area of soil and reaches groundwater ▪ Large groundwater plume which is not readily containable and recoverable and is severely impacting a range of environmental receptors. ▪ Destruction of rare or endangered flora or fauna species considered to have impact on conservation status of the species. ▪ Destruction of recognised threatened ecological community. ▪ Out of control bushfire started by operations. ▪ Severe erosion from large areas of vegetation or rehabilitation which mobilises significant soil material and exposes subsoil and root material.